

<110> Karunanandaa, Balasulojini  
Yu, Jaehyuk  
Kishore, Ganesh M.

<120> NUCLEIC ACID MOLECULES AND OTHER MOLECULES ASSOCIATED  
WITH STEROL SYNTHESIS AND METABOLISM

<130> 05686.0004.NPUS00

<150> US 60/142,981

<151> 1999-07-12

<160> 626

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<213> Glycine max

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<221> CDS

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Met Glu Tyr Ser Tyr Leu Leu Asp Met Ala Asp Lys Thr Glu Asp Pro  
15 20 25

tac atg aga cta gta tat gct tca tca ttc ttt ata tct gtc tac tat 149  
Tyr Met Arg Leu Val Tyr Ala Ser Ser Phe Phe Ile Ser Val Tyr Tyr  
30 35 40

gcc tat caa cga acg tgg aag cca ttc aat cca att ctt ggt gag act 197  
Ala Tyr Gln Arg Thr Trp Lys Pro Phe Asn Pro Ile Leu Gly Glu Thr  
45 50 55

tat gaa atg gtt aac cat ggt ggc att aca ttt ata tca gag cag gtc 245  
Tyr Glu Met Val Asn His Gly Gly Ile Thr Phe Ile Ser Glu Gln Val  
60 65 70

agt cat cac cct cca atg agt gct ggg cat gct gaa act gaa cat ttc 293  
Ser His His Pro Pro Met Ser Ala Gly His Ala Glu Thr Glu His Phe  
75 80 85 90

act tat gat gtt aca tca aaa ttg aaa acc aaa ttt ctc ggc aac tca 341  
Thr Tyr Asp Val Thr Ser Lys Leu Lys Thr Lys Phe Leu Gly Asn Ser  
95 100 105

gtt gat gta tat cct gtt gga aga acg cgt gtt acc ctc aaa aga gat	389
Val Asp Val Tyr Pro Val Gly Arg Thr Arg Val Thr Leu Lys Arg Asp	
110 115 120	
ggg gtg gtc ctt gat ttg gtg cct cct cct aca aaa gtt agc aac ttg	437
Gly Val Val Leu Asp Leu Val Pro Pro Pro Thr Lys Val Ser Asn Leu	
125 130 135	
att ttt gga cga act tgg att gat tca cca gga gag atg atc ctg aca	485
Ile Phe Gly Arg Thr Trp Ile Asp Ser Pro Gly Glu Met Ile Leu Thr	
140 145 150	
aat ctg act aca ggg gac aaa gtg gtg ctg tat ttt caa cca tgt ggc	533
Asn Leu Thr Thr Gly Asp Lys Val Val Leu Tyr Phe Gln Pro Cys Gly	
155 160 165 170	
tgg ttt gga tat gaa gtg gat ggg tac gtg tat aat tct gct gac gag	581
Trp Phe Gly Tyr Glu Val Asp Gly Tyr Val Tyr Asn Ser Ala Asp Glu	
175 180 185	
cct aag ata ctg atg act gga aaa tgg aat gag gct atg aat tat caa	629
Pro Lys Ile Leu Met Thr Gly Lys Trp Asn Glu Ala Met Asn Tyr Gln	
190 195 200	
gtt tgt gac tca gag gga gaa cca ctt cca ggc act gag ttg aaa gag	677
Val Cys Asp Ser Glu Gly Glu Pro Leu Pro Gly Thr Glu Leu Lys Glu	
205 210 215	
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Ile Trp Arg Val Ala Asp Thr Pro Lys Lys Asp Lys Phe Gln Tyr Thr	
220 225 230	
cat ttt gca cac aag att aac agc ttt gac act gct ccc aag aag ttg	773
His Phe Ala His Lys Ile Asn Ser Phe Asp Thr Ala Pro Lys Lys Leu	
235 240 245 250	
ttg gca tct gac tct cgt cta cgt cct gat aga atg gcc ctt gag aag	821
Leu Ala Ser Asp Ser Arg Leu Arg Pro Asp Arg Met Ala Leu Glu Lys	
255 260 265	
ggg gac cta tcc aca tct ggt tat gag aag agc agt ttg gag gag agg	869
Gly Asp Leu Ser Thr Ser Gly Tyr Glu Lys Ser Ser Leu Glu Glu Arg	
270 275 280	
caa aga gct gag aag aga aac cga gag gcc aag ggc cat aag ttc act	917
Gln Arg Ala Glu Lys Arg Asn Arg Glu Ala Lys Gly His Lys Phe Thr	
285 290 295	
cct aga tgg ttt gat tta aca gat gaa gta act cct acc cct tgg ggt	965
Pro Arg Trp Phe Asp Leu Thr Asp Glu Val Thr Pro Thr Pro Trp Gly	
300 305 310	
gac ttg gaa gtt tac caa tac aac ggt aaa tat acc caa cat tgt gct	1013
Asp Leu Glu Val Tyr Gln Tyr Asn Gly Lys Tyr Thr Gln His Cys Ala	



315	320	325	330	
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Ala Val Asp Ser Ser Glu Cys Ile Glu Val Pro Asp Ile Arg Pro Glu				
	335	340	345	
ttc aac cct tgg caa tat gat aat ttg gat gct gaa tag tgagcatcct				1110
Phe Asn Pro Trp Gln Tyr Asp Asn Leu Asp Ala Glu				
	350	355		
tgtggaattc tttctatattt ttttaaatat cattttgtta ttaagtttgt aatgtaatct				1170
tgattggaat gcttgaaatt tggttttgtt tttgggttgt tttatcactg tagtatttga				1230
ttaattaata gtagctatgt tagttcatca gttcactttg catggataaa tgctagtagg				1290
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Met Cys Asn Asn Gly Gln Ser Pro Leu Asp Arg Phe Ile	
1 5 10	
tct gtg gta gca tgg tgc ata tct acc act cgc cct gtg act ttt ggt	159
Ser Val Val Ala Trp Cys Ile Ser Thr Thr Arg Pro Val Thr Phe Gly	
15 20 25	
gtt gct cct tat aat ccc att ctt ggt gag aca cac cat gtt tca agg	207
Val Ala Pro Tyr Asn Pro Ile Leu Gly Glu Thr His His Val Ser Arg	
30 35 40 45	
gga aat ctt aat gtg tta ttg gag cag att tca cat cac cct cca gta	255
Gly Asn Leu Asn Val Leu Leu Glu Gln Ile Ser His His Pro Pro Val	
50 55 60	
act gct ctc cat gca aca gat gag aag gaa aac att gaa atg tta tgg	303
Thr Ala Leu His Ala Thr Asp Glu Lys Glu Asn Ile Glu Met Leu Trp	
65 70 75	

tgc cag cga cct gat cca aag ttt aat ggc aca tca gtt gaa gct aaa	351
Cys Gln Arg Pro Asp Pro Lys Phe Asn Gly Thr Ser Val Glu Ala Lys	
80 85 90	
gtg cat gga ata cgc cag ttg aag ctc cta aat cat ggt gaa aca tat	399
Val His Gly Ile Arg Gln Leu Lys Leu Leu Asn His Gly Glu Thr Tyr	
95 100 105	
gaa atg aat tgt cct cgc ctt tta ctt aga att ctt cca gtt cct ggt	447
Glu Met Asn Cys Pro Arg Leu Leu Leu Arg Ile Leu Pro Val Pro Gly	
110 115 120 125	
gct gat tgg gct ggt aca gtt aat ata cgg tgc cta gag aca ggt cta	495
Ala Asp Trp Ala Gly Thr Val Asn Ile Arg Cys Leu Glu Thr Gly Leu	
130 135 140	
gta gct gaa tta tcc tac aga tca agt tct ttt cta gga att ggg ggg	543
Val Ala Glu Leu Ser Tyr Arg Ser Ser Ser Phe Leu Gly Ile Gly Gly	
145 150 155	
aat cat aga gtg atc aaa ggg aag atc ctt gac tct tca tca ttg aaa	591
Asn His Arg Val Ile Lys Gly Lys Ile Leu Asp Ser Ser Ser Leu Lys	
160 165 170	
gtt cta tat gaa gtt gat ggt cat tgg gat agg acc gta aaa gtg aag	639
Val Leu Tyr Glu Val Asp Gly His Trp Asp Arg Thr Val Lys Val Lys	
175 180 185	
gac aca aat aat ggg aaa gta aga gtg ata tat gat gca aag gaa gtt	687
Asp Thr Asn Asn Gly Lys Val Arg Val Ile Tyr Asp Ala Lys Glu Val	
190 195 200 205	
atg tca ggt ctc gaa act cct ata ctc aag gac ata gag ggt gtg tgg	735
Met Ser Gly Leu Glu Thr Pro Ile Leu Lys Asp Ile Glu Gly Val Trp	
210 215 220	
caa aca gaa tca gct cat gtt tgg ggt gaa tta aac caa gcc att gtg	783
Gln Thr Glu Ser Ala His Val Trp Gly Glu Leu Asn Gln Ala Ile Val	
225 230 235	
agc aaa gac tgg gag aaa gca aga gaa gca aag cta aaa gtt gag gaa	831
Ser Lys Asp Trp Glu Lys Ala Arg Glu Ala Lys Leu Lys Val Glu Glu	
240 245 250	
aga caa agg gag ctt gtg aga gaa aga gaa tca aaa gga gaa aca tgg	879
Arg Gln Arg Glu Leu Val Arg Glu Arg Glu Ser Lys Gly Glu Thr Trp	
255 260 265	
att tct aag cat ttt gta gtt tct aac aac aaa gaa ggg tgg caa tgt	927
Ile Ser Lys His Phe Val Val Ser Asn Asn Lys Glu Gly Trp Gln Cys	
270 275 280 285	
tca cct att cat aag agt gta cct gcg gcc ccc atc aca gcc cta taa	975
Ser Pro Ile His Lys Ser Val Pro Ala Ala Pro Ile Thr Ala Leu	

290

295

300

ttgttgtcac tgtcaagtag tgtaaagcat taaagtacat tttagaagag aatgttcata 1035  
 aaaaaattta atggttgaaa ttttgacaac aatgaagtat ataacaaaat ttaaaattag 1095  
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tct tac ctg tta gat atg gcg gac aag act gag gat cca tac atg aga 100  
 Ser Tyr Leu Leu Asp Met Ala Asp Lys Thr Glu Asp Pro Tyr Met Arg  
 10 15 20

cta gta tat gct tca tca ttc ttt ata tct gtc tac tat gcc tat caa 148  
 Leu Val Tyr Ala Ser Ser Phe Phe Ile Ser Val Tyr Tyr Ala Tyr Gln  
 25 30 35

cga acg tgg aag cca ttc aat cca att ctt ggt gag act tat gaa atg 196  
 Arg Thr Trp Lys Pro Phe Asn Pro Ile Leu Gly Glu Thr Tyr Glu Met  
 40 45 50 55

gtt aac cat ggt ggc att aca ttt ata tca gag cag gtc agt cat cac 244  
 Val Asn His Gly Gly Ile Thr Phe Ile Ser Glu Gln Val Ser His His  
 60 65 70

cct cca atg agt gct ggg cat gct gaa act gaa cat ttc act tat gat 292  
 Pro Pro Met Ser Ala Gly His Ala Glu Thr Glu His Phe Thr Tyr Asp  
 75 80 85

gtt aca tca aaa ttg aaa acc aaa ttt ctc ggc aac tca gtt gat gta 340  
 Val Thr Ser Lys Leu Lys Thr Lys Phe Leu Gly Asn Ser Val Asp Val  
 90 95 100

tat cct gtt gga aga acg cgt gtt acc ctc aaa aga gat ggt gtg gtc 388  
 Tyr Pro Val Gly Arg Thr Arg Val Thr Leu Lys Arg Asp Gly Val Val  
 105 110 115

ctt gat ttg gtg cct cct cct aca aaa gtt agc aac ttg att ttt gga 436  
 Leu Asp Leu Val Pro Pro Pro Thr Lys Val Ser Asn Leu Ile Phe Gly

120	125	130	135	
cga act tgg att gat tca cca gga gag atg atc ctg aca aat ctg act				484
Arg Thr Trp Ile Asp Ser Pro Gly Glu Met Ile Leu Thr Asn Leu Thr				
140		145	150	
aca ggg gac aaa gtg gtg ctg tat ttt caa cca tgt ggc tgg ttt gga				532
Thr Gly Asp Lys Val Val Leu Tyr Phe Gln Pro Cys Gly Trp Phe Gly				
155		160	165	
gct ggt aga tat gaa gtg gat ggg tac gtg tat aat tct gct gac gag				580
Ala Gly Arg Tyr Glu Val Asp Gly Tyr Val Tyr Asn Ser Ala Asp Glu				
170		175	180	
cct aag ata ctg atg act gga aaa tgg aat gag gct atg aat tat caa				628
Pro Lys Ile Leu Met Thr Gly Lys Trp Asn Glu Ala Met Asn Tyr Gln				
185		190	195	
gtt tgt gac tca gag gga gaa cca ctt cca ggc act gag ttg aaa gag				676
Val Cys Asp Ser Glu Gly Glu Pro Leu Pro Gly Thr Glu Leu Lys Glu				
200		205	210	215
att tgg aga gtt gct gat acc ccg aag aag gac aag ttc cag tac acg				724
Ile Trp Arg Val Ala Asp Thr Pro Lys Lys Asp Lys Phe Gln Tyr Thr				
220		225	230	
cat ttt gca cac aag att aac agc ttt gac act gct ccc aag aag ttg				772
His Phe Ala His Lys Ile Asn Ser Phe Asp Thr Ala Pro Lys Lys Leu				
235		240	245	
ttg gca tct gac tct cgt cta cgt cct gat aga atg gcc ctt gag aag				820
Leu Ala Ser Asp Ser Arg Leu Arg Pro Asp Arg Met Ala Leu Glu Lys				
250		255	260	
ggc gac cta tcc aca tct ggt tat gag aag agc agt ttg gag gag agg				868
Gly Asp Leu Ser Thr Ser Gly Tyr Glu Lys Ser Ser Leu Glu Glu Arg				
265		270	275	
caa aga gct gag aag aga aac cga gag gcc aag ggc cat aag ttc act				916
Gln Arg Ala Glu Lys Arg Asn Arg Glu Ala Lys Gly His Lys Phe Thr				
280		285	290	295
cct aga tgg ttt gat tta aca gat gaa gta act cct acc cct tgg ggt				964
Pro Arg Trp Phe Asp Leu Thr Asp Glu Val Thr Pro Thr Pro Trp Gly				
300		305	310	
gac ttg gaa gtt tac caa tac aac ggt aaa tat acc caa cat tgt gct				1012
Asp Leu Glu Val Tyr Gln Tyr Asn Gly Lys Tyr Thr Gln His Cys Ala				
315		320	325	
gcc gtt gat agt tct gag tgc att gaa gtg cct gac atc aga cca gaa				1060
Ala Val Asp Ser Ser Glu Cys Ile Glu Val Pro Asp Ile Arg Pro Glu				
330		335	340	

ttc aac cct tgg caa tat gat aat ttg gat gct gaa tag tgagcatcct 1109  
Phe Asn Pro Trp Gln Tyr Asp Asn Leu Asp Ala Glu  
345 350 355

tgtggaattc tttctatattt tttgaaatat cattttgtta ttaagtttgt aatgtaatct 1169

tgattggaat gcttgaaatt tggttttgtt tttgggttgt tttatcactg tagtatttga 1229

ttaattaata gtagctatgt tagttcatca gttcactttg catggataaa tgctagtaga 1289

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ccgccg 1355

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Ser Trp Ser Ser Phe Leu Lys Ser Ile Ala Ser Phe Asn Gly Asp Leu  
20 25 30

tcc tct ctc acc gca ccg ccg ttc atc ctc tca aca acc tct tta acc 144  
Ser Ser Leu Thr Ala Pro Pro Phe Ile Leu Ser Thr Thr Ser Leu Thr  
35 40 45

gag tat tct gcg tac tgg tgc gaa cat cct gca ctc ttc gtt gcc ccc 192  
Glu Tyr Ser Ala Tyr Trp Cys Glu His Pro Ala Leu Phe Val Ala Pro  
50 55 60

gca cgt gag ccc gat cct gcg aag aga gcg ctc ttg gtg ctg aaa tgg 240  
Ala Arg Glu Pro Asp Pro Ala Lys Arg Ala Leu Leu Val Leu Lys Trp  
65 70 75 80

ttc ctg agc aca ttg cac caa cag tac tgc tct cga agc gaa aag cta 288  
Phe Leu Ser Thr Leu His Gln Gln Tyr Cys Ser Arg Ser Glu Lys Leu  
85 90 95

gga agc gag aaa aag ccg ctc aac ccg ttc ctg ggc gag ctt ttc ctg 336  
Gly Ser Glu Lys Lys Pro Leu Asn Pro Phe Leu Gly Glu Leu Phe Leu  
100 105 110

ggc aag tgg ata gag gat gag gat gtg ggc gag aca agg ttg atc agc	384
Gly Lys Trp Ile Glu Asp Glu Asp Val Gly Glu Thr Arg Leu Ile Ser	
115 120 125	
gag caa gtc agc cat cat cct cct gcg aca gcg tat tca ata gtc aat	432
Glu Gln Val Ser His His Pro Pro Ala Thr Ala Tyr Ser Ile Val Asn	
130 135 140	
gag aaa cat gga gtt gag ctc caa gga tac aac gcc caa aaa gcc tcc	480
Glu Lys His Gly Val Glu Leu Gln Gly Tyr Asn Ala Gln Lys Ala Ser	
145 150 155 160	
ttc tcc agc acc atc caa gtg aaa caa cta ggc cac gcc tat ctc tcc	528
Phe Ser Ser Thr Ile Gln Val Lys Gln Leu Gly His Ala Tyr Leu Ser	
165 170 175	
tta acg ccg ccc gga aaa gat gca aac aac gaa gac gac cgt gag cac	576
Leu Thr Pro Pro Gly Lys Asp Ala Asn Asn Glu Asp Asp Arg Glu His	
180 185 190	
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Tyr Leu Ile Thr Leu Pro Asn Leu His Ile Glu Ser Leu Ile Tyr Gly	
195 200 205	
aca cca ttc gtt gaa ttg gaa aag agt tgc aag atc gcc agc tca acc	672
Thr Pro Phe Val Glu Leu Glu Lys Ser Cys Lys Ile Ala Ser Ser Thr	
210 215 220	
ggg tac atc tct aag ata gac ttt tcg ggc aaa ggc tgg ctg agc gga	720
Gly Tyr Ile Ser Lys Ile Asp Phe Ser Gly Lys Gly Trp Leu Ser Gly	
225 230 235 240	
aag aaa aat acc ttc tcc gca gtg tta tac aag gaa agc gac ggc gaa	768
Lys Lys Asn Thr Phe Ser Ala Val Leu Tyr Lys Glu Ser Asp Gly Glu	
245 250 255	
aaa aat cct tta tac aca gcc gac ggt caa tgg tcg agc agc ttc act	816
Lys Asn Pro Leu Tyr Thr Ala Asp Gly Gln Trp Ser Ser Ser Phe Thr	
260 265 270	
atc cgc gat gca cgc gct aag aag gat att gag acc ttc act atc agc	864
Ile Arg Asp Ala Arg Ala Lys Lys Asp Ile Glu Thr Phe Thr Ile Ser	
275 280 285	
aat ctg aaa aca acc ccc tta aca gtc gcc cct ctt gat gaa caa gat	912
Asn Leu Lys Thr Thr Pro Leu Thr Val Ala Pro Leu Asp Glu Gln Asp	
290 295 300	
gaa tgg gaa act cgc cgt gca tgg cgc gac gta gca gcc gcc atc gaa	960
Glu Trp Glu Thr Arg Arg Ala Trp Arg Asp Val Ala Ala Ala Ile Glu	
305 310 315 320	
cgc ggc gac atg gaa gcc aca tca aac gcc aaa acc aag atc gaa gtc	1008
Arg Gly Asp Met Glu Ala Thr Ser Asn Ala Lys Thr Lys Ile Glu Val	

325	330	335	
gcg caa cga gaa ctc cgc aaa aag gag aaa gag caa ggc gag gag tgg			1056
Ala Gln Arg Glu Leu Arg Lys Lys Glu Lys Glu Gln Gly Glu Glu Trp			
340	345	350	
gaa cga cga ttc ttc aag cga gtc aac gaa aag gat gaa cct acc ttt			1104
Glu Arg Arg Phe Phe Lys Arg Val Asn Glu Lys Asp Glu Pro Thr Phe			
355	360	365	
atg aga ttg gcg gcg atg ctg gat ttg acg caa ggc atc gaa agt gac			1152
Met Arg Leu Ala Ala Met Leu Asp Leu Thr Gln Gly Ile Glu Ser Asp			
370	375	380	
cgc acc ggg gga gtt tgg agg ttt gat cct tca cgt gct gtg gat gcg			1200
Arg Thr Gly Gly Val Trp Arg Phe Asp Pro Ser Arg Ala Val Asp Ala			
385	390	395	400
aat ccg ccg tat cac aag gtt ggc ggc gaa ggg ttg gga ttg taa			1245
Asn Pro Pro Tyr His Lys Val Gly Gly Glu Gly Leu Gly Leu			
405	410		
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aatgtgtatt aagtagcgct ttttctcgac cgttgagatt catggatgca agtgtaccta			1365
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tagaaatcgt ttgtgatcac cattgtcgaa tttgacgcgc ttaaacaaaa accattgttt			240
tggcctcggt ccttgcattc aacaaaagag caaggtatgc cgtcaaacag tcgttaaaag			300
agaaggttta taaactatct tgttttgtac tttgctgtcc cggatccagt tgggtcttct			360
tttcaacctg tctgagtcg atctttcttt cctacttga agctccatat atctaagtca			420

tctaagtgtgta tccgtgctaga ttacaaacga aa	atg tct caa cac gca agc tca	473
	Met Ser Gln His Ala Ser Ser	
	1 5	
tct tct tgg act tct ttt ttg aaa tcg ata agt tcg ttc aac gga gat	521	
Ser Ser Trp Thr Ser Phe Leu Lys Ser Ile Ser Ser Phe Asn Gly Asp		
10 15 20		
cta tcg tct ttg tct gca cca ccg ttt att ctt tct ccc act tcc tta	569	
Leu Ser Ser Leu Ser Ala Pro Pro Phe Ile Leu Ser Pro Thr Ser Leu		
25 30 35		
aca gag ttt tct cag tat tgg gct gaa cat cca gct tta ttt ctg gag	617	
Thr Glu Phe Ser Gln Tyr Trp Ala Glu His Pro Ala Leu Phe Leu Glu		
40 45 50 55		
cct tcg ttg att gat ggt gaa aac tac aaa gat cac tgt ccc ttt gac	665	
Pro Ser Leu Ile Asp Gly Glu Asn Tyr Lys Asp His Cys Pro Phe Asp		
60 65 70		
cca aat gtg gaa tca aag gaa gtg gcg cag atg ttg gcg gtt gtt agg	713	
Pro Asn Val Glu Ser Lys Glu Val Ala Gln Met Leu Ala Val Val Arg		
75 80 85		
tgg ttt att tct act ttg aga tct caa tac tgc tct aga agc gaa tcg	761	
Trp Phe Ile Ser Thr Leu Arg Ser Gln Tyr Cys Ser Arg Ser Glu Ser		
90 95 100		
atg ggt tct gaa aag aag cct ttg aac cca ttc ttg ggt gag gta ttt	809	
Met Gly Ser Glu Lys Lys Pro Leu Asn Pro Phe Leu Gly Glu Val Phe		
105 110 115		
gtt gga aag tgg aaa aat gat gag cat cca gag ttt ggt gaa acg gtt	857	
Val Gly Lys Trp Lys Asn Asp Glu His Pro Glu Phe Gly Glu Thr Val		
120 125 130 135		
ctt tta agt gag caa gtt tca cat cat cca cct atg aca gca ttt tcg	905	
Leu Leu Ser Glu Gln Val Ser His His Pro Pro Met Thr Ala Phe Ser		
140 145 150		
att ttt aat gaa aaa aat gat gtt tct gtt caa gga tac aat caa att	953	
Ile Phe Asn Glu Lys Asn Asp Val Ser Val Gln Gly Tyr Asn Gln Ile		
155 160 165		
aaa act ggt ttt acc aaa aca ttg acg cta acg gtc aaa cca tac ggg	1001	
Lys Thr Gly Phe Thr Lys Thr Leu Thr Leu Thr Val Lys Pro Tyr Gly		
170 175 180		
cat gtc att ttg aag att aaa gat gag acc tac ctg att aca acc ccg	1049	
His Val Ile Leu Lys Ile Lys Asp Glu Thr Tyr Leu Ile Thr Thr Pro		
185 190 195		
cct ttg cat atc gaa ggt att tta gtc gct tct cca ttt gtt gaa tta	1097	
Pro Leu His Ile Glu Gly Ile Leu Val Ala Ser Pro Phe Val Glu Leu		



200	205	210	215	
gga ggc agg tca ttc ata cag tca tca aat ggt atg tta tgt gtt ata				1145
Gly Gly Arg Ser Phe Ile Gln Ser Ser Asn Gly Met Leu Cys Val Ile				
220		225	230	
gaa ttt tca gga agg ggg tat ttc aca ggg aag aag aac tcc ttt aag				1193
Glu Phe Ser Gly Arg Gly Tyr Phe Thr Gly Lys Lys Asn Ser Phe Lys				
235		240	245	
gca aga att tac aga agc cca caa gag cat agt cat aaa gaa aat gcg				1241
Ala Arg Ile Tyr Arg Ser Pro Gln Glu His Ser His Lys Glu Asn Ala				
250		255	260	
cta tac cta atc tct ggc caa tgg tca ggt gtt tca aca att ata aaa				1289
Leu Tyr Leu Ile Ser Gly Gln Trp Ser Gly Val Ser Thr Ile Ile Lys				
265		270	275	
aaa gac tcg caa gtt tca cat cag ttt tac gat tca tcg gaa act cct				1337
Lys Asp Ser Gln Val Ser His Gln Phe Tyr Asp Ser Ser Glu Thr Pro				
280		285	290	295
act gaa cat tta tta gtt aag cca atc gaa gaa caa cat cct ctg gaa				1385
Thr Glu His Leu Leu Val Lys Pro Ile Glu Glu Gln His Pro Leu Glu				
300		305	310	
agt agg agg gca tgg aag gat gtg gca gaa gca atc aga caa gga aat				1433
Ser Arg Arg Ala Trp Lys Asp Val Ala Glu Ala Ile Arg Gln Gly Asn				
315		320	325	
att agt atg ata aaa aag act aag gaa gaa cta gaa aat aag caa aga				1481
Ile Ser Met Ile Lys Lys Thr Lys Glu Glu Leu Glu Asn Lys Gln Arg				
330		335	340	
gcc ttg aga gaa caa gaa cgc gta aaa ggt gtg gaa tgg caa aga aga				1529
Ala Leu Arg Glu Gln Glu Arg Val Lys Gly Val Glu Trp Gln Arg Arg				
345		350	355	
tgg ttc aaa caa gtg gac tac atg aat gaa aat aca tca aat gat gta				1577
Trp Phe Lys Gln Val Asp Tyr Met Asn Glu Asn Thr Ser Asn Asp Val				
360		365	370	375
gag aaa gca agt gaa gat gat gcc ttt agg aaa ttg gcg tcc aaa ctg				1625
Glu Lys Ala Ser Glu Asp Asp Ala Phe Arg Lys Leu Ala Ser Lys Leu				
380		385	390	
cag ctt tct gtg aaa aat gtg cca agt ggg aca ttg att ggc ggc aaa				1673
Gln Leu Ser Val Lys Asn Val Pro Ser Gly Thr Leu Ile Gly Gly Lys				
395		400	405	
gat gat aag aaa gat gtt tca acc gca ttg cat tgg agg ttt gat aaa				1721
Asp Asp Lys Lys Asp Val Ser Thr Ala Leu His Trp Arg Phe Asp Lys				
410		415	420	

aat ttg tgg atg agg gag aac gaa att act ata taa tataaatgtt 1767  
 Asn Leu Trp Met Arg Glu Asn Glu Ile Thr Ile  
 425 430

tttaaaagaa taaatatcaa aaattaatac taattgatgt ttgcattgct ttttttaagg 1827  
 gaaaatgcaa gcgtttttat ttttaacttt tggttttgaa gctcgtaatt caacaaaaaa 1887  
 gaattaaata atcttcaagt ccgataacaa gatgtagaaa aaacatccca atgaagttac 1947  
 aagtcaaacc attcactgag aattttttgta actcaccacc gatttttttg ataaaaatgta 2007  
 ttcttgcaac tttttttttt gaagagataa aaagaattga atagaatatg cagtaaaaaa 2067  
 agaatctcga aaaaaaaagg acaagaaatc ttaactacca tcaaacaatt gaaaattga 2126

<210> 6  
 <211> 266  
 <212> DNA  
 <213> Glycine max

<400> 6  
 ccattcaatc caattcttgg tgagacttat gaaatgggta accatgggtg cattacattt 60  
 atatcagagc aggtcagtc taccctcca atgagtgtg ggcagtgtga aactgaacat 120  
 ttcacttatg atgttacatc aaaattgaaa accaaatttc tcggcaactc agttgatgta 180  
 tatectgttg gaagaacgcg tgttaccctc aaaagagatg gtgtgggcct tgatttggtg 240  
 cctctccta caaaagttag caactt 266

<210> 7  
 <211> 291  
 <212> DNA  
 <213> Glycine max

<220>  
 <223> unsure at all n locations

<400> 7  
 tcacaacttc agtgctatgg tgaatcagtg tattgcacag gttcggactt gctaagcatg 60  
 tgcaacaatg gtcagagtc acttgatagg ttcatatctg tggtagcatg gtgcatatct 120  
 accactcgcc ctgtgacttt tgggtgttgc ccttataatc ccantcttgg tgagacacac 180  
 cncgtttcaa ggggaaatct taatgtgtta ttggagcaga tttcacatca cctccagta 240  
 actgctctcc atgcaacaga tgaganggaa aacattgaaa tgttatgggtg c 291

<210> 8  
 <211> 282  
 <212> DNA  
 <213> Glycine max

<220>  
 <223> unsure at all n locations

<400> 8

gtgcccagng acaggtctgg tagctgaaat atcatatcatg atcaagccat tgctttttta 60  
 ggaatttnggg gaagtcgtaa attgatcaaa gggnaaatcc ttgactcatn attactcaaa 120  
 ggtctctgcg aagttgatng tcattgggat aagatagtta gagtgaagga tacnaatagt 180  
 gnagaagtga gagtgatata tgatgccaaa gaagcctttt caggtctcaa aactcctatt 240  
 atcaaggatg tggagagtgt gtggccaacc gaatcagccc tt 282

<210> 9  
 <211> 255  
 <212> DNA  
 <213> Glycine max

<400> 9

gtaactccta ccccttgggg tgacttgga gtttaccaat acaacggtaa atatacccaa 60  
 cattgtgctg ccgttgatag ttctgagtgc attgaagtgc ctgacatcag accagaattc 120  
 aacccttggc aatatgataa tttggatgct gaatagttag catccttgtg gaattctttc 180  
 tatttttttt aaatatcatt ttgttattaa gtttgtaatg taatcttgat tggaagcttg 240  
 aaatttggtt ttgtt 255

<210> 10  
 <211> 250  
 <212> DNA  
 <213> Glycine max

<400> 10

taactcttac cccttggggg gacttgaag tttaccaata caacggtaaa tatacccaac 60  
 attgtgctgc cggttgatag tctgagtgc ttgaagtgcc tgacatcaga ccagaattca 120  
 acccttggca atatgataat ttggatgctg aatagtgagc atccttgtgg aattctttct 180

atTTTTTTta aatatcattt tgttattaag ttgtaatgt aatcttgatt ggaatgcttg 240  
aaatttggtt 250

<210> 11  
<211> 283  
<212> DNA  
<213> Glycine max

<220>  
<223> unsure at all n locations

<400> 11

cgctgtgnt taatttccca aaatctcaac ttcaatgcta nggtgaatca gtgtactgca 60  
catcttccaa cttgctaagc caatgcaaac agtgggcaga gtccactgga caggttcaca 120  
tcagtagtag catggagcat atctaccaca cgccccacat cttttggtgt tgctccttat 180  
aattccactc ttggagagac ccaccatgtt tccaagggca atctcaacgt cctagttgag 240  
caggtttcac tcaatcctcc agtatctgcc ctccatgcaa cag 283

<210> 12  
<211> 255  
<212> DNA  
<213> Glycine max

<400> 12

ggagagtgtg tggccaaccg aatcagccct tgtttgaggt gagttgagcc aagccattat 60  
gaacaaagat tgggaaagag caagagaagc aaagcaagac gtggaagaaa gacagaggaa 120  
tatgttgaga gacagagcca tgaaaggaga aacttggttt cctaagaatt ttaggggtgtc 180  
ttacagtaaa gacacatggg aatgggactg ttcaccaact cataaatggg tccctgaggc 240  
cccatcata gctca 255

<210> 13  
<211> 259  
<212> DNA  
<213> Glycine max

<220>  
<223> unsure at all n locations

<400> 13

agtcaaccct ccagtatctg ccctccatgc aacagatgag anggaaaaca ttgagatgat 60  
 atgggtccag caacctgttc caaagtttcg gggtagatct atgaagctca agtgcattgg 120  
 aaacgtcata tgtttctcca tgatttagga gcttcagctg acgtttacca tgcacttgag 180  
 ctgangctcc taaatcatgg agaaacatat gaaatgaatt gtcctcacct ttcaattaga 240  
 attcttccgg ttcttgga 259

<210> 14  
 <211> 355  
 <212> DNA  
 <213> Glycine max

<220>  
 <223> unsure at all n locations

<400> 14

gcagcttttg ctgtgtctag ctatgcgtca actgaangtc gacaatgtaa acctttta 60  
 cctttactcg gggagacctt cgaagctgac tatccagata aaggacttaa gtttttttct 120  
 gaaaagggtta gtcattcatc aatgattggt gcttgtcact gtgagggaag gggatggaag 180  
 ttttgggcag attctaattt gaaaggaaaa ttctgggggc gttctatcca gttagatcct 240  
 gtgggtgtcc tcaactctaca gtttgaggat ggtgaaacat ttcagtggag caaggtcacc 300  
 acttcgattt acaatatcat actangtaaa atttattgtg accactacgg tacca 355

<210> 15  
 <211> 279  
 <212> DNA  
 <213> Glycine max

<220>  
 <223> unsure at all n locations

<400> 15

cagattcgga ggaggaagct cagagaggaa gatggaaaca ggaggaaaga gatggttact 60  
 ggaagatgat gcagaagtat attggctcgg atgtaacatc aatgggtgaca ctaccagtta 120  
 ttatatttga accaatgact atgattcaga aaattgctga gttgatggag tactcctact 180  
 tgtagatca agcagatgaa tcagaggatc catacatgca gttagtttat gcaatggatg 240  
 tacttnatgt atcatcacag catccatggg ccatatcgg 279

<210> 16  
 <211> 191  
 <212> DNA  
 <213> Glycine max  
  
 <400> 16  
  
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 tatgataatt tggatgctga ataataagca tccttgtaga attctttcta ttctttgaac 120  
 tatcattttg ttattaagtt tgcaatgtat ctgattggaa tgcttgaaat ttgggtttgt 180  
 ttttgggtaa a 191

<210> 17  
 <211> 267  
 <212> DNA  
 <213> Glycine max

<220>  
 <223> unsure at all n locations

<400> 17  
  
 tcaactcctt ggggtgattt ggaaatctat caatataatg gtaaatacag tgaacatcga 60  
 gctgctgcag ataactcagg aagcattgat gatgttgatg ctaaataaat tgaattcaat 120  
 ccattggcagt atggtaattt ggccacggaa tgaactagtt tcaatttctt tgggttttga 180  
 tgntncagtt agttcatgta actntthnch antganacna gaanacaact ncctncnna 240  
 ncnannngtt agttgggcng tgtacgc 267

<210> 18  
 <211> 252  
 <212> DNA  
 <213> Glycine max

<400> 18  
  
 gctttataga gctcccaatc tctacatcg cttgttaagt ttactcaaga acgtgcggcc 60  
 aggatcagat ctcacacact tccaactgcc agctgtgttt aacttcccaa aatctcaact 120  
 tcaatgctat ggtgaatcag tgtactgcac atcttcaaac ttgctgagca aatgcaacaa 180  
 tgggcagagt ccaactggaca ggttcacatc agtagtagca tggagcatat ctaccacagc 240  
 cccacatct tt 252

<210> 19  
 <211> 241  
 <212> DNA  
 <213> Glycine max

<400> 19

gtcagtcac accctccaat gagtgctggg catgctgaaa ctgaacattt cacttatgat 60  
 gttacatcaa aattgaaaac caaatttctc ggcaactcag ttgatgtata tcctgttgga 120  
 agaacgcgtg ttacctcaa aagagatggg gtggctcttg atttgggtgcc tcctcctaca 180  
 aaagtttagca acttgatttt tggacgaact tggattgatt caccaggaga gatgatcctg 240  
 a 241

<210> 20  
 <211> 262  
 <212> DNA  
 <213> Glycine max

<400> 20

tctcgagcct attcggctcg aggccaaaga agccatttca ggtcactaaa ctctattat 60  
 catatgatgt ggagagtgtg tattcaaccg aatcagccct tgtttgaggt gagttgagcc 120  
 aagccattat gaacaaagat tgggaaagag caagagaagc aaagcaagac gtggaagaaa 180  
 gacagaggaa tatgttgaga gacagagcca tgacaggaga aactgggtgt ctaagaattt 240  
 aggggtgtctt acagtaaaga ca 262

<210> 21  
 <211> 463  
 <212> DNA  
 <213> Arabidopsis thaliana

<220>  
 <223> unsure at all n locations

<400> 21

ggggaacccc ttccaggaac agagctgaaa gaggtgtggc atttggctga tgtccccaaa 60  
 aacgacaact ttcagtacac tcactttgct cacaagataa acagcttcga cacagcgcct 120  
 gctaagctct tggtctcaga ctacgtatc cgtcttgata gatattccct tgagcagggt 180

gaccttttcta aagctgggttc cgagaaacac agccttgagg agagacaaaag ggccgaaaag 240  
aggaccagag agacaaaggg acaaaagttc actccaagat ggttcgatct aacggatgag 300  
atcacaccta ctccatgggg agatattgaa gtataccant acaacgggaa gtacaatgaa 360  
caccgagaca cggcagagag ctcaagtagt gctccaacg aaacgggact caaatccatc 420  
gagtttaate cttggcaata tggtaatatc tcaaccgaat gaa 463

<210> 22  
<211> 399  
<212> DNA  
<213> Arabidopsis thaliana

<400> 22

agtgaacctc tcccaggcac cgaactgaaa gaggtatgga aactcgctga tgtgccaaag 60  
gatgacaaat atcaatacac tcaacttgct cacaagatta atagcttcga cactgccccg 120  
aaaaagctgt tgccctctga ttcacgggta cgacctgata gatacgact tgagatgggc 180  
gacatgtcca aatcaggcta tgagaagagc agcatggaag agagacagag agctgacaag 240  
agaaccgcg aacataaagg ccaagccttt actccaaaat ggttcgatgt aacggaagaa 300  
gtcactgcta caccatgggg tgatctggaa gtttaccaat tcaactggaaa gtactcagaa 360  
catcgtgcag ctgcggataa ctctgaagat aagaccgac 399

<210> 23  
<211> 343  
<212> DNA  
<213> Arabidopsis thaliana

<400> 23

acggacgcgt gggcaactcc aatgttacgg cgagatggtc tacagcttcg tcggtcagga 60  
tctgcttggg gaatgcagcc gccgtgatct tcccattgaa cggctcaaat cagtgggtgac 120  
gtggaacatc tccacactcc gtccgggtggc ctttggcatg tctccgtaca actccgttct 180  
cggcgagact caccacgtat cgaacgggtca catcaacgtc atcgccgaac aagtagtgca 240  
tcatectcgg gtttccgctc ttcattgcgac tcacgaacaa gaaaatatcg acgtgacatg 300  
gtgtcaatat tcaactccta aatttcgtgg tactcacgtg gac 343

<210> 24



<211> 510  
 <212> DNA  
 <213> Arabidopsis thaliana

<220>  
 <223> unsure at all n locations

<400> 24

gaaagctagc agatgtagaa caaagttttt tgtaactacg agagaataag aatacatttg 60  
 ttccaaaaa gatttgatct tttctgtctt ttggagcgat acatttaagt agacagatct 120  
 tggaattgcc atgggttgaa ttggatcgac ttagggtcgg tggtatcttc agagttatcc 180  
 gcagctgcac gatgttccga gtactttcca ttgaattggg aaacttccag atcaccccat 240  
 ggtgtagcag tgacttcttc cgttacatcg aaccattttg gagtaaaggc ttggcctttc 300  
 tcttcgctgg gtctcttttc aagtctctgt cncctctcca tgggtgntctt cccanagcct 360  
 gatttgnaca tggcggccan cccaaggng gatcaatcag gccgnaacgg ggaatcagnn 420  
 ggnaacagct tttcngggna ntgncgaagc aataaacnt gggggcaaag gggggggatt 480  
 ggaaattggc aacccttggn naacaggggc 510

<210> 25  
 <211> 282  
 <212> DNA  
 <213> Arabidopsis thaliana

<220>  
 <223> unsure at all n locations

<400> 25

gatacatttg gattcgaaaa gaggcagccta gaggatagac aaagagctga gaagaaaagc 60  
 agagaagaga aaggccaaaa ntttcncca aaatggtttn atgaaacana agangtcact 120  
 cctacaccat ggggtgatct cgaagtttac caattcantg gaaagtactc ggtgcaccgn 180  
 gccacagctg aaaactntga ggatacaacc gntgtgaagt tgncccaatt caacccttgg 240  
 caattccaag atctctntgc ttaatccttt ggtgccattt gt 282

<210> 26  
 <211> 380  
 <212> DNA  
 <213> Arabidopsis thaliana

<220>

<223> unsure at all n locations

<400> 26

cgttggtggc ngcggaagtg gtttcttcgc ctctcttgct tcgtcgatct ccaatttngg 60  
ntctgctatg accaaatcag ttaatggttt ggttccctat gagggacttg aagttatcaa 120  
tcttgaagga agtacagatg atgctgagga ggaagcaagc agaggaagat ggaagcaaga 180  
ggatcgagat ggctattgga agatgatgca gaagtacata ggatctgatg ttacatcaat 240  
ggtgaccctt cctgtgatta tttttgaacc aatgacaatg cttcagaaaa tggcggagtt 300  
gatggaatac tcgcatctgc tagacatggc agacaaaacc gaggaccctt atttncgcat 360  
gggtgatgca tcatcgtggg 380

<210> 27

<211> 359

<212> DNA

<213> Arabidopsis thaliana

<220>

<223> unsure at all n locations

<400> 27

ggtaatgaag gagttgaggt cataaatcca gaaggtggca aggaagatnc tgaagaggaa 60  
gctcagaaag gaaggtggaa ggacgaggaa cgagatagtt actggaagat gatgcagaaa 120  
tatataggtt cggatattac gtcaatgggtg gctcttcctg ttgtnatatt tnancctatg 180  
actatnctcc anaagatggc tgagataatg gagtattctc atttnttga tcaagcagat 240  
gaatgengag atccatactt gctgttagta tatccttcat catgggggtat atctgtttac 300  
tatggccttc caacggacct tggaagcctt tnaatccnat tcttgggggg gnnanttna 359

<210> 28

<211> 510

<212> DNA

<213> Arabidopsis thaliana

<220>

<223> unsure at all n locations

<400> 28

aaaagagaaa agtgttagcc ttggtcaat gatcaaagac antataggga aggntctcac 60

aaaagtctgt cttcctgttt acttcaacga gccactttct tctttacaga aatgttttga 120  
 ggatttggaa tattegtacc ttcttgaccg agcatttgaa tatggcaaaa ggggaaatag 180  
 cctcatgagg atacttaatg tagctgcttt tgctgtatct gggatatgcac caactgaagg 240  
 aagaatttgc aaacctttta atccattggt aggtgaaaca tacgnngcag actatccaga 300  
 caaaggcctt cggttttttt ccaggaaagg tcagtcacac tcctatgggt gtcgnatgcc 360  
 attgtgatgg caccnggtgg gaattcttgg gggacagcaa tcttnggggc aaatttttgg 420  
 gcgntctntt tagcttnacc cccttgggga ttnnccctna aattnatgat ggggaanccn 480  
 caggggggaa gnggccacc atnncaaacc 510

<210> 29  
 <211> 493  
 <212> DNA  
 <213> *Arabidopsis thaliana*  
 <220>  
 <223> unsure at all n locations  
 <400> 29

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 cctttcccaa tnggnnttgg gngngcccc ttggangggg ccggggcttt aaagggcccc 120  
 ncgnaggga ggcagcctt tctcccaaat ggtcgatgta ccggaggaag tcaactgctac 180  
 cccatggggg gatctggaag tttcccaatt caatggaaag tactcggaac atcgtgcagc 240  
 tgccgataac tctgaagata acaccgaccc taagtcgatc caattcaacc catggcaatt 300  
 ccaagatctg tctacttaaa tgtatcgctc caaaagacag aaaagatcaa atcttttttg 360  
 aaacaaatgt attcttattc tctcgtagtt acaaaaaact ttgttctaca tctgctagct 420  
 tccccattgc tttctctagt attagtgtac aacttctact gttttgtctt aaattcattc 480  
 aaatctttct ttg 493

<210> 30  
 <211> 1305  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 30

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 aacggagatc tategtcttt gtctgcacca cegtttattc tttctcccac ttctttaaca 120  
 gagttttctc agtattgggc tgaacatcca gctttatttc tggagccttc gttgattgat 180  
 ggtgaaaact acaaagatca ctgtcccttt gacccaaatg tggaatcaaa ggaagtggcg 240  
 cagatgttgg cgggttgtag gtggtttatt tctactttga gatctcaata ctgctctaga 300  
 agcgaatcga tgggttctga aaagaagcct ttgaacccat tcttgggtga ggtatttggt 360  
 ggaaagtgga aaaatgatga gcatccagag tttggtgaaa cggttctttt aagtgagcaa 420  
 gtttcacatc atccacctat gacagcattt tcgattttta atgaaaaaaaa tgatgtttct 480  
 gttcaaggat acaatcaa ataaaactgggt ttaccacaaa cattgacgct aacgggtcaaa 540  
 ccatacgggc atgtcatttt gaagattaaa gatgagacct acctgattac aaccccgctt 600  
 ttgcatatcg aagggtatttt agtcgcttct ccatttggtg aattaggagg caggctattc 660  
 atacagtcac caaatgggtat gttatgtgtt atagaatttt caggaagggg gtatttcaca 720  
 gggaagaaga actcctttta ggcaagaatt tacagaagcc cacaagagca tagtcataaa 780  
 gaaaatgcgc tataccta atcttgccaa tggtcaggtg tttcaacaat tataaaaaaa 840  
 gactcgcaag tttcacatca gttttacgat tcatcgaaa ctctactga acatttatta 900  
 gttaagccaa tcgaagaaca acatcctctg gaaagtagga gggcatggaa ggatgtggca 960  
 gaagcaatca gacaaggaaa tattagtatg ataaaaaaga ctaaggaaga actagaaaaat 1020  
 aagcaaagag ccttgagaga acaagaacgc gtaaaagggtg tggaatggca aagaagatgg 1080  
 ttcaaacaag tggactacat gaatgaaaat acatcaa atgtagagaa agcaagtga 1140  
 gatgatgcct ttaggaaatt ggcgtccaaa ctgcagcttt ctgtgaaaaa tgtgccaaagt 1200  
 gggacattga ttggcgccaa agatgataag aaagatgttt caaccgcatt gcattggagg 1260  
 tttgataaaa atttgtggat gagggagaac gaaattacta tataa 1305

<210> 31  
 <211> 1200  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 31

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gcattttaagt tcttcggaaa gaagctgtta agttcaagcc atgggaacaa gttgaagaaa 120  
aaggcgtctc tacctccaga cttccactct acaagtacta atgacagcga atcctccagc 180  
ccaaaactgc cgaattcggt gaaaacctct cgccgtgcaa actctttcgc tcacacaacc 240  
aacagcaaga gatctttatc ttccgcctca accaagatcc tacctccggc cggctccagc 300  
acgtccatct caagaggaaa cagacattcg tccacttcgc gtaatctctc aaactccaag 360  
ttcagtagcg aacgattagt gtacaatcca tacggcgtct caacccaag caggtcactc 420  
tcgtccgtct ctacctccat gaagaaagac cctgatctgg gcttctacct tcacgatggg 480  
gattccaaaa tccgcatgct gccgatccca attgtggacc caaacgagta tctgcccagc 540  
gagatgaagg agycaagcat ccagttgagc gataacttcg tctttgatga tgagaataag 600  
accatcggat ggggcggttc gtgcgaagtg cgcaagatcc gctccaagta ccgcaagaag 660  
gacgtatttg ctctaaagaa gctcaatatg atctataatg aaacgccga gaaattctac 720  
aacgtgctc caaaggagtt tatcatcgca aagcagctaa gtcatcatgt tcacatcaca 780  
aatactttcc ttctagtcaa ggtgccacc accgtctaca cactcgcgg gtggggggttc 840  
gtcatggagc taggtctacg agatttggtc gcgatgatac aaaaatcggg ctggcgccac 900  
gtggccctag cagaaaagtt ttgtatattc aaacaggtgg cgtgtggtgt caagttttgc 960  
cacgatcagg gcacgcccc cctgatattg aaaccgaaa atgtactgct atccccggac 1020  
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cctgtccagc cctgtcaaga agtgccgagg gatgatcggc tcgccgccgt atgctcccc 1140  
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<210> 32  
<211> 309  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 32

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tttaacaggt atcatttgaa aaaaagaatc gttttccaga tactcgtcaa ttctcgtctt 180  
cggttctctg aacaaaactt ctcgattacg caaatgagg ctggcatatg gaagcagttg 240

ttcaactctc cccaaagttt tccacatact gatataccat cagaagaagg taccaaagtt 300  
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<211> 4014  
<212> DNA  
<213> *Saccharomyces cerevisiae*  
  
<400> 33

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cgcttccaat atagtgcga tgagcccgt gagaaaatcc gacctttacg ctgaggagc 180  
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<211> 2394  
<212> DNA  
<213> *Saccharomyces cerevisiae*

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 gacaagtggg atgattgtaa accaaatata agtttagagc ataacgttcc gatcatcaga 2340  
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<210> 35  
 <211> 303  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 35

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 tcaccaccag caggcgtcag tagatcactg cgcacatcatg taatgtggaa gcagagtaaa 180  
 ttaactcccc caagatttgt gaagatcatg aatagacgcc ctctgttcac agaaactagt 240  
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<210> 36  
 <211> 888  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 36

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 ccaaccactc tattgagcac gccagtagct ctcaaaaatg gctttggaac accatcgccg 180  
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 gaagaagaaa atgaaaatca aaagaagtac gacggacacg ttagtatgcc tttgttgcca 420  
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 gcgctcggag gccaccacc acgggaggag gccacggctg tcgaaacact gatgctattg 780  
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<210> 37  
 <211> 2121  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 37

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 aataaggaaa ttgtccatca gattgggtgt tacacagttc atgggttggc taatagaatc 300  
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 aaagttgtta aggattacaa gctaaacaac gcaaaaaata ataaccccgat cattgagaaa 480  
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 gatttgaaac gatctgtatg tgacgttaag gtgacacatg gttataatgt gcagcgatac 2040  
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<210> 38  
 <211> 3414  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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 gagaaaaatg tacctagatc aaacggaaga accaaaaacg aacacaatag tatggatgac 180  
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<400> 41

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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<211> 318  
<212> DNA

<213> Saccharomyces cerevisiae

<400> 45

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attccaagtg ggacctga 318

<210> 46

<211> 309

<212> DNA

<213> Saccharomyces cerevisiae

<400> 46

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<211> 1110

<212> DNA

<213> Saccharomyces cerevisiae

<400> 47

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 <213> *Saccharomyces cerevisiae*  
 <400> 48

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 gtaa atgggt caatgagtat gctaaacaag gtttttggtta tggagtacgg taagaaaaac 240  
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 <211> 2706  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 49

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 <211> 942  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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<210> 51  
<211> 765  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 51

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<400> 52

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 tataacgcac ccttagtgaa tcaataa 1407

<210> 53  
 <211> 1863  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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tga 1863

<210> 54  
<211> 474  
<212> DNA  
<213> *Saccharomyces cerevisiae*

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<210> 55  
<211> 897  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 55  
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<210> 56  
<211> 2508  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 56

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gctatcaatg atgacaattc tgtcattgct attaatctca acaccatgga caaattggaa 180  
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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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 aaaaaatgct cagcgattta ccttcattac aaccaccgag attcactagg aaacggagct 300  
 gtccctcgga atttattgtc aacatatcat ccaatgttaa tntag 345

<210> 59  
 <211> 552  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 59

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aagatacttt ga 552
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<210> 60  
 <211> 1599  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 60

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 ttgagagtct tcaatgggtg ccacatggtt ccatttgacg tcctgaaaaa cgccttaagt 1560  
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<210> 61  
 <211> 1107  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 61

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<210> 62  
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 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
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ggtgaactat tgaagagctc attgaagaga agatcaaaat cattacctac aaccccaggt 600  
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 aatccaaaca atggtaaagg caccaacaat acaaaattaa gaaaaagtaa aagatttcag 960  
 aacctcctaa agaacaggac cgacatgcca ccatcaaaat caaataaaaa attcgттаат 1020  
 ggtggcggtg ctcatgaaat ttcatatcgt aattcaaaaa attaccatgt tgttggatta 1080  
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 agagacaaca attacttttc aaattcctcc tcattttata atattcccaa tagccacaat 1260  
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 gatagttgga gaacaacaca tgaagtggaa tgcgtttaca tcagtgatgg cgatggaata 1440  
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 cctcgcggca agttagaatt ttgcattcat tattctacac gtaacgacta tgagcgcgaa 1560  
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<210> 63  
 <211> 1593  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 63  
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 gtagaattgc atagaaccaa cgaattcatt gataataagc cgtccttttt caataggatt 180  
 gcagctgctt taaatgctga gacgaaaggt attgaaccag ttacagaaga tgaaaaaaat 240

gatgactcga tactcaatgc cgccactata tggttttcag ctaatatggt gattgtagcc 300  
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gttatcattt ttttcaatat tttgggtttg atccctgttg cattattctc actttttggg 420  
gtagaactgg gcctaagaca gatgattcta tcgagatatt tggctggtaa catcacagca 480  
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agacctttag aactcaaata tttcgggtcga tga 1593

<210> 64  
<211> 651  
<212> DNA  
<213> *Saccharomyces cerevisiae*  
<400> 64

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 tgcccacgta aaccattga gataaagta ttttcacaga tatgtaacga tatgatgaac 120  
 aaaaaggacc gattgggtga tattttgcat attatcttgc gagcatgtgc actcaatttc 180  
 gggggcgggtc cccgtggtgg cgctggtgac gaagaggatc gatctattac gaatgaagaa 240  
 cccattatcc cctctgtgga cgagcatggc ctgaaagtat gtaagttgcg cagtcctaac 300  
 actccacgaa gactcagaaa aacactagat gccgtgaaag ctttattggt gtcgtcttgt 360  
 gcttgtagcg caagggattt agatatattt gatgacaaca acggcgttgc aatgtggaaa 420  
 tggatcaaaa ttctgtacca cgaagtagcg caggaaacca cgctgaagga ctcttataga 480  
 ataactttgg taccttcttc tgatggtata tcagtatgtg gaaaactttg gggagagttg 540  
 aacaactgct tccatatgcc agcctcattt tgcgtaatcg agaagttttg ttcagagaac 600  
 cgaagcgagg aattgacgag tatctggaaa acgattcttt tcttcaaatg a 651

<210> 65  
 <211> 1665  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 65

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 aagcgacaat gtgttgagga aaattacgat aaaaaatttt ctatgattaa aaaaaaacgt 180  
 cagcaaacat tacaaaagta caagcttagt cttctgaatc cgttggaaaag ggcttttcgc 240  
 cctttatcat atgaaaagta catgattggt ttaaatatgc agtatgcac gcattctctc 300  
 actgaaggtc atcactcaca tagttctgct aacgtaaaat cactcaattt tccacacagg 360  
 atacagatag gagtattagc aaattgtatt ttattggtta ctcaagaagg atgttttcat 420  
 agtaaattag tatttgcaac aaacaagggc tatgtcgcag gattttcatc cctggataat 480  
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ctcaaagaaa attgccaagt ccatgattct cttgttgttg gagacacggt gattattacc 780  
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 tacgtaaatc cgtttgatgc tgtggaacct ctagggtgaag agagcagtac ttcaccttac 1560  
 gatatacctg aagaagcact ttctcaaaaa atatgcatct taattcggag agaagatgat 1620  
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<210> 66  
 <211> 405  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 66  
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 acacatatat tggtaagctt ccaggaagac aattgggtat ttggattatc ggccgtattg 180  
 agaatccttt tctttataca acgcatagaa tctttgggat ttacccttct agatcttaac 240  
 acatctgaaa tttccaacgc tatggggaga tcaaggtcac cgttggaat gctctcacta 300  
 gtggcttggt ctattaatgc gtctaactca cttggcgtgc taacggacat actgttctta 360  
 gttctttact cactactcat tcaccttagc aaaaaaaaaa cttga 405

<210> 67  
 <211> 336  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 67

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 catatgaaaa acaacctcgt aactaaatgg ttgaatcggg tcttgcacac gtcgctaaag 180  
 atgggtatgg acgtgtaccg tggattcaac aactcccttg gcgtctgtat catctgcttg 240  
 cectgtaatg tcttttcgtc ttctcaatca cacttactca tcgccaaaga gtctgctctt 300  
 cccgttagtg attctcgatg ttattatatt ctttag 336

<210> 68  
 <211> 366  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 68

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 gaagttagtt cggtaacaaa tgtagtagat tctttttcat tctcgaaggc tggagaagta 180  
 gccggcttga atccgtcaac tacatctgcc caatattcct ttttcaatgg gtttctaggc 240  
 atttttgatt ttgagggttg atatctgtat ttgtgtacta atgagtcaga tagcgataat 300  
 attatacgtc aaaaaaactt gggaaggaca atgaattgta ataacgctga tgatatgttg 360  
 ttttga 366

<210> 69  
 <211> 597  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 69

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caacctccaa ttacatcgac ggattttaca atcaatggta ttaagccatg gcaaggaagt 180  
 ttgectgata acatcggagg gactgtctac atgtatgcag gctactatta tccgctgaag 240  
 gttgtttact ccaatgccgt ttcttggggc acgcttccaa ttagcgtgga attgcctgat 300  
 ggtactactg ttagtgatga ctttgaaggg tacgtttact cttttgacga tgatttaagt 360  
 cagtcaaatt gtactatccc tgatccttca aacatacta ctagcatcgt cacaactact 420  
 accgaactgt ggactggtag ttttacttct acatctactg aaatgaccac cgtcaccggt 480  
 actaatggtc aaccaactga cgaaaccgtt attgttgcca aagctccaac cactgccacc 540  
 tcatecagtt tgtcatcacc ttcttcagaa caaatcacca gctctatcac gtcttag 597

<210> 70  
 <211> 1554  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 70

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 gacgctgact ggcatcttga tgaagtcacg ctcggaacaa attcttccaa agatgattct 180  
 cgtctgactc tgcccctaata agcaacaact ttgaagagat tgattaaatc gcaaccggca 240  
 ttgtttgcaa ctgtaaacga agaatgggaa ttcgagccat tgaagcagct gaaaacttcc 300  
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 tcaaataaac ctttatggac actatatgta attgacgaag cgctattggg ttttcatggg 480  
 cacgacgtat tgtttgatat attttcagca gctaactttc acaaattatt tttaaaagag 540  
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 tataacactt taaaaagacc tttcggctat ttaaccaatc aaacttcctt cagctcgtca 780  
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 gggacaacag tatttgggat agtaaacac caaagggtta actattttaa gtcaatcgtt 900



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atgtctcttt cctatacata ctgtgaagag atgggcctga atatctgtat tcactaccct 1500  
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<210> 71  
<211> 315  
<212> DNA  
<213> *Saccharomyces cerevisiae*  
<400> 71

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tctgtgggtt gtgccttggt ggaagccaat cttctgggtg aagccaaagc agcagcggca 180  
ggctcttgcgg ccttggtaga gttaattaga gttctcgata gagaacgaat agcagcagta 240  
cgagccaaca ttattatatg tgcgtgtttt ttttatttat tttgttactg ttcttgcgat 300  
agttatgaga gctga 315

<210> 72  
<211> 5619  
<212> DNA  
<213> *Saccharomyces cerevisiae*  
<400> 72

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cgccttaagc atagtataaa cgatataaac tggcgctctc tcgtttcaat actcaattct 180  
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 <211> 2505  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 73

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 <211> 1608  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 74

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 ccagaataca gagaagtcac ggagaaaatc tcagaacagt tcaaaaagga tgatttcaaa 420  
 gtcaccaata ggttaatcga attgattagc cctgtaatca tacctctggg taatccgaag 480  
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 aaaaacttcg tttatgtcac taaccactgc ggctccgacg gtgtcagtgg atcgaatttt 600  
 ttcaaagatt tagctctact cttttgtaaa atcgaagaaa aagggtttga ttatgatgaa 660  
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 atgaacatgg acatgagcgt ggttcaggcg actctacggg atcgtggcga atgggaatcg 1560  
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<210> 75  
 <211> 939  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 75

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<210> 76  
 <211> 588  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 76

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gttgatctgc ttcagtttcc ctgggttaaat gctatcaagt atcgcccac atctgtcaag   540
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<210> 77  
 <211> 2352  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 77

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<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 78

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<212> DNA  
<213> *Saccharomyces cerevisiae*

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 <213> *Saccharomyces cerevisiae*

<400> 81

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<211> 1062  
<212> DNA  
<213> *Saccharomyces cerevisiae*

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<211> 534  
<212> DNA

<213> Saccharomyces cerevisiae

<400> 83

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<210> 84

<211> 411

<212> DNA

<213> Saccharomyces cerevisiae

<400> 84

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<210> 85

<211> 462

<212> DNA

<213> Saccharomyces cerevisiae

<400> 85

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<210> 86  
 <211> 1995  
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 <213> *Saccharomyces cerevisiae*

<400> 86

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 <213> *Saccharomyces cerevisiae*

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 <213> *Saccharomyces cerevisiae*

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<213>      *Saccharomyces cerevisiae*

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<400> 97

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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 <213> *Saccharomyces cerevisiae*

<400> 104

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<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 105

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 <211> 2316  
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 <213> *Saccharomyces cerevisiae*

<400> 106

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<400> 108

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<212> DNA  
<213> *Saccharomyces cerevisiae*

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<210> 110  
 <211> 1770  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 110

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 tcaactgagcg gtactctata tgtgtaccaa ggacaggaac tgggtgaaat caatttcaag 1200  
 aactggccta tcgaaaaata cgaggatgtc gaagttagaa ataactatga tgcgatcaag 1260  
 gaagagcatg gagaaaactc gaaggagatg aagaggtttt tggaagcaat tgccttatt 1320  
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 tttagaaagg cacacaagga tattactgtg tatggatatg attttgagtt tattgatttg 1560  
 gacaataaga aactgttcag cttcacaaag aaatacgaca acaaacatt gtttgcgtgt 1620  
 ttgaacttca gctctgattc gatcgacttc acgattccaa acaatagctc atcgtttaag 1680  
 ttggaattcg gaaactaccc aagaagtga gttgatgcgt cttccagaac attgaagcca 1740  
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<210> 111  
 <211> 2115  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 111

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 tctctagata tcaaaaacac tgtcttagat agtgcggatc tcaatgacat tcaaatcaa 180  
 gaaacttcac tgaatttggg gcttcctcca ctatctttcg actctccact gcccgtaacg 240  
 gaaacgatac catccactac cgataacagc ttgcatttga aagctgatag caacaaaaat 300  
 cgcgatgcaa gaactattga aaatgatagt gaaattaaga gtactaataa tgctagtggc 360

tctggggcaa atcaatacac aactcttact tcaccttata ctatgaacga cattttgtac 420  
aacatgaaca atccgttaca atcacctgca ccttcacggt tacctcaaaa tccgactata 480  
aatcctccca taaatacagc aagtaacgaa actaatttat cgcttcaaac ttcaaagtgt 540  
aatgaaactc ttatatctcc tcgagcccaa caacatacgt ccattaaaga taatcgtctg 600  
tccttaccta atgggtgctaa ttggaatctt ttcattgaca ctaacccaaa caatttgaac 660  
gaaaaactaa gaaatcaatt gaactcagat acaaattcat attctaactc cattttctaat 720  
tcaaaactca attctacggg taattttaaatt tccagttatt ttaattcact gaacatagac 780  
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gaactcgagg agaaaccgtt ccaactgtcac atttgtccca agagctttta gcgcagcgaa 1980

catttgaaaa ggcatgtgag atctgttcac tctaacgaac gaccatttgc ttgtcacata 2040  
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<210> 112  
 <211> 375  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 112

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 agccagtaca gagggtcgga agtctcactg gacacgatcc cgtacagcgg aatctggccc 120  
 agaatcaaaa agatcagtag agaaacgcct gtccagataa gtttctgggt gtatggaacc 180  
 ttcctttctg gagcaatcac ttccggcagg aaagattcaa atggcttaaa caagtctaga 240  
 acacggttgg aggacatddd caaagtaaag cgtgaaccag tgtcagtttt tctacttgct 300  
 actatattta actatgtttt tttcttttgc tttcaccaac tgaaccttgt agtaaattga 360  
 gtgaggttga attga 375

<210> 113  
 <211> 1098  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 113

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 ctgcccgtt cgttggcagc taatattcct gtcaagtggc agaaattgct agggttgaac 120  
 agtgggttca gcaattctac gattttgcag gagactttga actccaagaa tgccgtcaaa 180  
 gaatgtagaa ggttctacgg gcaggtgcca ttctgtttg atatgtcgac gacgtctttt 240  
 gcatecgtat tgctcgttc cagcatcttg agagaattcc tctcactatg ggttattggt 300  
 acgatctttg gtttactact ttacttatcc acggctagtc tcagctacgt gtttgtgttt 360  
 gacaagtcga ttttcaacca tctcgttac ttgaaaaacc aaatggcaat ggaaatcaag 420  
 ttggcagtea gtgctatccc atggatgtcg atgttgaccg ttccatgggt tgttatggaa 480  
 ttgaacggcc attctaaact atacatgaag attgattatg aaaaccacgg tgtaaggaag 540

ctcattatcg agtacttcac tttcatcttt ttcactgatt gcggtgtgta tttagcgcac 600  
 agatgggttg attgccaag ggtctaccgt gctctgcaca agcctcatca caagtggctg 660  
 gtctgcacac ctttcgcac tcattctttc catcctgtag acgggttttt gcaatccatc 720  
 tcgtaccaca tctaccatt gattctgcca ttacacaagg tttcttattt gattctgttc 780  
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 gccgtcaacg gtactgcctg ccacacgggt caccatctat atttcaacta caactacggg 900  
 caattcacca ctctgtggga cagactaggg gggtcttacc gtagaccaga tgactcattg 960  
 tttgatccta agttaagaga tgctaaggag acctgggacg ctcaagttaa ggaagttgaa 1020  
 catttcatca aggaggtcga aggtgatgat aatgatagaa tctatgaaaa cgacccaaat 1080  
 accaagaaga acaactga 1098

<210> 114  
 <211> 1659  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 114  
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 gatgatgtgg tcagagtagt cagccatagc gatgagagta ctgatgacga actttgtaat 180  
 gtgaatttaa cagaaacagg ggcaatcttc acgagtaaag gttttaccgg gttaagcaaa 240  
 ggtttcacag ataagacct ggatttcctg gtacgagtgg ccgggttcga ggcggttttt 300  
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 ctgttgatga gacaacagtt gatgagtacg catgaacaaa ttttgatctg cggtagattg 480  
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 gcagactgca cagttgaagc taatgaagtc agctctgttg aaaatcatat agacctatct 600  
 gccattaacg gagaactgcc tgtggaaaat tggtagacc gtttatctaa cgtagcaagt 660  
 aggtatatgg gttcaattgc agcaatgggtg atattttgga taggtatttt cgtttggatt 720  
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 tgtattgctt ccggtttgcg ttggagtaca acaggtcaat tgattgctaa cagccaact 1500  
 atgattatcg aagaattttt cttgctagtt ttgttgcaag cacataattg ggccgatcgt 1560  
 caaagaagag tggaggttac cgctttgtac gcacgtaggc gcatacttct atcatacgta 1620  
 gaaaagcgtt tcccagaggt tatgatgttg gaaaaatag 1659

<210> 115  
 <211> 1722  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 115

atggaaacta ttttgcagcc aaaggctaga ccatttgagt ctttgaaaag aaaacgtttt 60  
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 ttgcgtgact ttgcaaaacc taatcccgtc gacacatttt ctaatcttga ttctgggtcat 180  
 tgtccttttg tcacaactcc aataaaatat gagggtccag atggaaagag ttcttttttc 240  
 cgaggagaca ctaaatttga aaccctgttc agtaatagaa aattctatga gttcaaagat 300  
 aatttgaaaa ggggattgaa gaaaatacgt catgggagaa acggacatca aagcgaaaag 360  
 agatgtccag ttgttgaaga aacaaaaaag tctgtgtcag ataattctga caaaccagac 420  
 aataatacgc cctgtttcga cagattccac acaaattcga aagaatttga aacgcaattt 480

gatcattcaa ataggagcca aaattccgag aaggcttatac tagacaatga atcctgttgg 540  
aacctaagtg agaaatttat tccttttaaat aattttaaata atgaagattt gaaacatttt 600  
gaagagaatt tgcaaagctt agcgccctgca acttttactc caattgaatc aaatgaatcg 660  
cttgataggt cagattcgac acgtggcaca aaacgaagca ttcgcaatga ttccagtgat 720  
acaacatctg aaaagaggct atgcttaaaa caatactcag atgaacctga atcggatcat 780  
tcgatggaaa gtacaccatc catttacatt accaaagaag ttcaagaaag aattgaagca 840  
ttaagctcca cggattcgtt tttaattgaa aaagtagatt ttccctctaa caaaattggt 900  
tccagtgcct cggattatga aagtgataac gaatacagaa atatggatga ggattcaata 960  
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ttaatctaca aaaaatctaa aaagttaaac aaagatgaga ctcaaagtgg ttattcgact 1560  
actgaaatga ggtcaattct aaagacaaag atgaattcac agcatgatga ggagtctcag 1620  
agagcttcga agtgtgacac agtaggtgta gcccaatttt tacattattt tcaatataga 1680  
gagtataaaa ggcagagaaa tgaagcagaa attatagact ga 1722

<210> 116  
<211> 618  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 116

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gcactacca catgtggctc aggggtattt atgctcactt caagcgtgcc attgttacag 120



gaagtgtgcg acgcgtcggg tacgctagca tgcaccgctt cattgttcac aagcagcggc 180  
 ggcttttttta gcaaaccacc tgtagtcca ctagattttc tacttctgct tctacttcta 240  
 ctattaccgt tgetattgcc accgttgccg tccgttaaag gtgagccaga cgcattgcgag 300  
 attcctgtac tgccctcggt gttatttttt ttgttggtgt tgetctgctt tcttccagag 360  
 ccacttgaaa cctcttttcc attcatatcc gcgatgcaat cccttatacg cttcttaata 420  
 aactttgctt cccactcttt cactactgac catcgatcct tcttatttca tagcctcagc 480  
 agcacaaatg ataatacgag aaaaaggccc gaccgggtaa ccaacccttt tactatctct 540  
 cgctctacct ttagtaataa tgcgtcttat ataaggattt actcatacag tagtccaaaa 600  
 tatacctttc cgtgctaa 618

<210> 117  
 <211> 534  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 117

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 tacgtaaagt ctttcccacc attcttgctt tggccgctgc aagatccgct cttcgtggtc 120  
 tctgtactaa gagtagatat agtcatttct atttgttacc acacacaaat atatcttcat 180  
 ccggctgata tttgtctcta ctgccccctt gcttgcaatt taatgaccaa attacacatg 240  
 ttagcttcaa gaaaaatgat gtaccatcaa aatgtctctt gcaacgaacc ggggcaccgc 300  
 gccggcagag tcaggaaagc gagatcgaca ctgatagtga taaacagcaa cacaatggag 360  
 cgattaccat tcaactcgga cggatccgga caacagtcaa ataaactccg ggatcccaaa 420  
 aagggccgta cacacaaacc caagccgagc gaaaaacaca aaaaaataa aacagggaaa 480  
 aaaggagcgc aagagaaaac gcacaggagt aggagcagca gaaaggggaa ctaa 534

<210> 118  
 <211> 1833  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 118

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 tccatggagg ttctgccacg gtcgtctacc acgtcgtctg tggagccagt ggagtcgact 180  
 gaaggagtgg agtcgactga ggcggaacgt gtggcagggg agcaggagca ggaggaggag 240  
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 aggttccacc gaaaggatgc tagcaagtat gtgtcgtttt ttggggacgt gagttttgat 360  
 cctcgcccca cgctcctgga cagcgccatc aacgtgcctt tccagacgac tttcaaaggt 420  
 ccggtgctgg agaaacagct caaaaattta cagttgacaa agaccaagac caaggccacg 480  
 gtgaagacta cggatgaagac tacggagaaa acggacaagg cagatgcccc ccaggagaa 540  
 aaactggagt cgaacttttc agggatctac gtgttcgcat ggatgttctt gggctggata 600  
 gccatcaggt gctgcacaga ttactatgct tcgtacggca gtgcatggaa taagctggaa 660  
 atcgtgcagt acatgacaac ggacttgctt acgatcgcaa tgttgactt ggcaatgttc 720  
 ctgtgcactt tcttcgtggg ttctgtgcac tggctgggtg aaaagcggat catcaactgg 780  
 aagtggactg ggttcgttgc agtgagcatc ttcgagttgg ctttcatccc cgtgacgttc 840  
 cccatttacg tctactactt tgatttcaac tgggtcacga gaatcttcct gttcctgcac 900  
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tatctgttca tgttccaact gtcgcagttt gtgtggactg ctttgagcaa caccaagttt 1740  
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agtatcatta tgacgttgta cctgacctta tga 1833

<210> 119  
<211> 3363  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 119

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caggcgaccc ctgaatgcc aaaaagtttcc tctaagtatg atcctgataa cccaaacaaa 180  
gataagttgg gaacatacga tgggggtatct gtgcctactg ctttaaactg attgtctatc 240  
cttatgtttc ttcgttttgg cttcattttg ggtcagttag gtattatatg caccatcggt 300  
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acaaacggga ctggttagggg cgggggtgct tattatatga tttcaagaag ttaggacct 420  
gaatttggtg gatccattgg gcttgtcttt ttcttagggc aggtgttcaa tgcaggtatg 480  
aacgcagttg gtattatcga acctttactc tataacttgg gttattctgc tcaaggcgag 540  
ccacctgcag ctttgggaga gctactacca agagggcatt ggacgaatt tacatatgcc 600  
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 ccattgccta cggatgagtg taaaaatgaa accaaagtta atgtacaaca atgggttcaa 2100  
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<212> DNA  
<213> *Saccharomyces cerevisiae*

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<210> 121  
<211> 2808  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400>

121

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<210> 122  
<211> 381  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 122

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 gacccgtatt ctctgtttctt gccatcatct cgtattccaa aaaaatcttt ccacagtccc 300  
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<210> 123  
 <211> 1527  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 123

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 aatgggtgaac tcagcaagag atcgaacggc catgaaaaat ttgtactagc taacgagcaa 180  
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 gaatctaact caacctttgg tgtgctcggg atcggccttt ccacgcttga agtcacctat 540  
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 <211> 2586  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 124

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 <211> 321  
 <212> DNA  
 <213> Saccharomyces cerevisiae

<400> 125

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 acagaagagg aactttctct tctaccagca ttcaagtggc cggaagttaa gtttaatcta 240  
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 caatatacaa ttgtttcttg a 321

<210> 126  
 <211> 1482  
 <212> DNA  
 <213> Saccharomyces cerevisiae

<400> 126

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 tcagcaatac acctgcaaat ttccaacaaa tctactccca atacattcaa ttcttttagat 180  
 ttttctacga ggtccaggat aaatggttct ctgagttatt tatactccga tgcacagcaa 240  
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 <213> *Saccharomyces cerevisiae*  
 <400> 127

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 gatactacta ctgaagctcc aaccaccgct ctccaacta acggtacttc tactgaagct 360  
 ccaactgata ctactactga agctccaacc accggtcttc caaccaacgg taccacttca 420  
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<210> 128  
 <211> 1386  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 128

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<210> 129  
 <211> 2280  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 129

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<210> 130  
<211> 1863  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400>

130

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ttacctaaac atcataatcc cgttcgtacg ggacacactg tgccccactt accccatagt 420  
attcacaatc caataaacta cattcatcaa ggctcaaaag atgctttcca ccatcctcac 480  
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 ttggtcactg aggaggagtt gaatgagctg accaagcaac acgggaataa agattcaaat 1860  
 taa 1863

<210> 131  
 <211> 1089  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 131

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 gccagaaga tgaaagtgcc gggagagaac gaggacgaaa gcaaggaaga ggaaaagagt 360  
 caagaactgg aagaggcaat tgacagcaag gagaagagca ccgacgccag ggacgagcaa 420  
 ggggacgaag gtgataatga ggaggaaaac aacgaggagg ataataaaaa cgaaaacgag 480  
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 ccggaattgc aggtctacta ctggaagatt gccgcgatcc gtgactaaa gctacaccga 720  
 gcgtaccagc gacagaagta cgagctttca tgcataaca cagaaacaat cgctaccagg 780  
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 ccagatgtca attaccacgt ccccatcaaa cttgataaca agacgctgag ctgtatcacg 960  
 ggctacgcag cgcacgacag ctgtgctatc ccggcgagcc cgtggcagag gacctcgctt 1020

gcgaaagcat cgagtaccgc tacagagcca acccggtgga caaactcgaa gtcattgtgg 1080  
accgaatga 1089

<210> 132  
<211> 984  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 132

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aaagatagac tgacagcatt gcaaacggat ttaacttctc tgcatacaagg tgataatggc 180  
caatatgccc gccaaagtacg agatttggag gaagaaagag atctagagtt agtcaggttg 240  
cgctgttttg aagagtaccg tgtttctcgt tccggtatcg aatttcaaga agatattgaa 300  
aaggctaagg ctgaacacga gaaactcatt aaattatgca aagaaagact gtattcgtct 360  
atagagcaaa aaataaagaa attacaggag gagagggtac taatggatgt ggccaatgtg 420  
cactcctatg ccatgaatta tagcagaccg caataccaga agaacacgag aagtcacaca 480  
gtaagtgggtt gggattcttc gtccaacgaa tatggaagag atacagcaaa cgaaagtgct 540  
actgacacgg gagctggaaa cgatagaaga acgctaagga gaaggaatgc ttctaaagac 600  
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tatgcatttt tgtttggcga aaagaacccc aaagacaatg ctaatgggaa tgaaaagaaa 840  
aaaaaccgtg gtgctcaacg atattccacc aaaacagctc cacctttaca gtctttgaaa 900  
ccagatgagg tcacagagga tatttccttg atcagagaat taacaggta gcctccggct 960  
cctttcagac taaggtctga ctaa 984

<210> 133  
<211> 996  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 133

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 attcgtcagg gatccttgaa tgggccaga ttaattacgt gtggacatgc catttcccaa 180  
 actggtgggc atggcgatct gagatctggt gccctacctg ctagtgccct tgacagctgt 240  
 tcatgccact ttggtcaagt tgggtgtgta gcagatgggt ttcccgaatg ctacaaagcg 300  
 gccagagaag agtttagaag aggtgcagac ttattaaga ttatgggtgg tggaggtgtg 360  
 gcctctccaa ctgacaaaat atcaaacaaa caattttgcg acgacgaaat aaaagcactt 420  
 gtagatgtcg caaatagtta ccacacatac gtaacagcac acgcctacac tgcggaagcg 480  
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 cgtaccgcag agcttatggc agaattgggt tgctacttga ctccaacact agttacctac 600  
 aaagtgatgg gttctgatca atttagtgca ttcttgggac ctgaaaatag tagaaaaaat 660  
 acagaggtgc ttacaaagg aattgatgca atgaaaattg ccagaaaaa aaaagttaaa 720  
 atttgttttg gttcagattt attgggtcct ctatatggtt atcaaacgca agagtttcgt 780  
 attagaggga aagttcaaac gacacaagag attttgctct cagcaactgt tactcctgcc 840  
 gaaatgaacg gattaggcga taaattggga cagattaagc cagggttcat tgctgacct 900  
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 atactatttg tcatgaaaga gggaaggata tattga 996

<210> 134  
 <211> 1215  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 134

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 tttgagagcc agatgtcgtg gctaagggtt caaacaaggc agtatctaac tagattcaca 180  
 gacaaccaat cagatttcgt acattcttta caaaaaaagc acagaacgcc ttttagagac 240  
 gtttatttca aatacacttc gcttatgggt tcccacatgt tttatgttat cgtgcttccc 300  
 atgcctgtgt ggcttgata ccgcgattta acacgggaca tgatctacgt tcttggttat 360

tcaattttatt tgagtggcta cttaaaggat tattggtgcc taccaaggcc aaaatcaccg 420  
 ccagttgaca gaatcacact aagtgaatac actacgaaag aatatggtgc acccagttca 480  
 cattctgcta acgctactgc ggtaagtcta ttattctttt ggagaatatg tttatctgac 540  
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 gcttctgtga ttgtttgga agacgtcatt agcaagacag ctgtctacac gctgttaatt 1020  
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 gaagaagaag agtgtttatt gtacagcggg gtttccaaag tggaaatcgt cggaagggtt 1140  
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<210> 135  
 <211> 429  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 135

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 ggcaaataa acagccacgt gccacgggt ttctctagcc tcatcagctc cgcatacggg 180  
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 gcaacttcca actctttcga cgtaaacaca ggtgctgatt ctttcgagga aggggaggag 300  
 gaggaggagg aagaagacgt atatctcttt ctgctgcttc caatgattcc agcaacggta 360  
 actcgccgcg tgcccagaat ggacctcct agtaaaatac tctttctctg ccaaataaac 420  
 attagttga 429

<210> 136  
 <211> 1548  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 136

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actggtgaca atgtaggtgg cgccctgaga gttcccgggtg ctatctccga gaaacagtta 180
gaagaacttt taaatcaatt gaacgggtact tcagacgata cagtgccata taccttcagc 240
tgtacaattc aaggtaagaa ggccagtgac cctgtgaaga cgattgatat aacagataac 300
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agagggcata tagccagcgt ataccaggtt gcgtgggtcat cggactgccg actactgggtg 1380

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gacctccctg gtcataaaga cgaagtttat accgtcgact ggagtgtcga cggtaaaaga 1500  
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<210> 137  
<211> 1731  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 137

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<210> 138  
 <211> 3570  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 138

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 <213> *Saccharomyces cerevisiae*

<400> 140

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<400> 141

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<400> 142

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<400> 143

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tatgccagtg aagtgcagc agcactagaa tatttacatc tgttgggtt tatctataga 1860



gattttaaacc cagagaatat ttgctgcat caatcaggcc atatcatgct ttctgacttc 1920  
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catctcgatg agcaagagaa aaatatgttt gaagaacgag ttgaatacga cgatgaagtc 2520  
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<210> 144  
<211> 582  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 144

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ctttgcaaac aatgcttctg cctcgtgttc gagacggaga tccataacac tattgtagca 180  
aataacttgt ttcagagggg agaaaaagta gccgtggggg cctctggtgg taaagactcc 240  
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gtactgttga gtattgacga aggaatcatt ggatacagag atgattcctt ggccacggtg 360  
aaaaggaatc agcagcagta tggccttctt ttggagattt tttcctttaa ggacctctat 420  
gattggacaa tggatgagat tgtatccgtt gctgggtataa ggaacagttg cacgtattgt 480  
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tcaccggcca caatgcagac gatatggcag agacagtact aa

582

<210> 145  
<211> 1422  
<212> DNA  
<213> *Saccharomyces cerevisiae*  
  
<400> 145

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agagccttca gagaccaagc aaaatgtaag agaaagtacg gaaaagattg ggatgagtat 1380  
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<210> 146  
 <211> 4104  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 146

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 ttgtttgatg atgataaatc actttcagac tggacggata atgtgttcac tcaatcagta 180  
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 tccgtcgata tatcttccaa ctgcgaatac tatccggcca ttgagaattt gagtccaagt 360  
 gatcaggaaa gcaatgttaa gaaatgcatt gctgtcattc tgttacagcg ctatccatta 420  
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 gatctgggga agcgttctt tacatcagga cttctgcaaa atagatttgt cagctctacc 600  
 ctgttagatg ttatttatga aaacaatgaa tccaccatcg aactaaataa taggttggtg 660  
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<210> 147  
<211> 567  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 147

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ggtatctctt ggatcatcta ccaaattggcc agaaagagaa ttgttgctaa aaacgacatg 180  
 actaccatga agtacgtcga acctggtaat gctatgtccg gcgaagggtga gaagctgcaa 240  
 gttactaccg tcagagacta cgatttgaag gaaatagaca gtgctatcaa gtctatctac 300  
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 ttgggtaage ctgcaaccgg cgatttgaag agaccattca aggtcccatc tttgtttggt 480  
 ggtatgggtc aaactgggtc aaagaccgac aagaaatcta tcgaagaagc tgaaagagcc 540  
 ggtaacgctg gtgttaaggc tgaatga 567

<210> 148  
 <211> 435  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 148

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 cagtccttca cggaaaaaaaa aaaagagcac tgggtcactt cggaaaaact tttgactcaa 180  
 tgcaacagtg tcataatcct ttgcgctgtc tctttgaaga aaaatcagga gtgcaagata 240  
 tcgattaatt ccttggaagt tatgatggtt agtcttagtt taactctctt gaagaagggg 300  
 tttttcagtt ggtcaacact ctttagaggt aaaaaaaaaa aaaaaaaaaa aaaaaagaga 360  
 attcttcatg taatttacca tgattctacg tttttgcaag caaaaatgaa gataatccga 420  
 ggcgatgcga agtag 435

<210> 149  
 <211> 351  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 149

atggggaaat attcatcatg tagaatttca aatattttca ttgtaatttc taaaattaat 60  
 gagggaaaatt cgatatatct ggtatcactt tattattcct tcagcacgaa atgtcgagcg 120  
 atctcgatgc aggaaccagg tataagtagc gatagtaaatt tttttctctt ctttttaata 180

atccggaaag tctcagttgc gagtgattgc agacagttgt atgaatgtaa aaaaagtaat 240  
 gaaaacattt gggagtatTTT caaacggagg ttagagacga ggctttcgag cttttctatt 300  
 attttaagtg ctgtgtttcc ggacgtgctc ttcactttct tattttcttg a 351

<210> 150  
 <211> 642  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 150  
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 atatggattt tgtttgtgct gtttgttgcc gcagtaatcc ttataatact gttcactttt 180  
 gtagcgaaca gaaggagacg aaggatgggg cgtgctccca ttagaggtag gccatgggtg 240  
 acaccgcctt catacagaca gtctcagcaa caatatactg ggaccgttca gcaacggaca 300  
 gatgattatg ttcctgagta tacagaaaca gcgaacgaac atgatcttgg atactatgac 360  
 cagcggggcg agtttcaccc caacgataag gctgcatacg tggccccccc gccattggta 420  
 caagaatgtt catcagaatc tgtaattct ttagaaagac ctcccgtgc tgtagttcac 480  
 caagctaact ctttagatac ggattacggg ttaacaaggc ctagcaatgg gcgcgttcca 540  
 gctgtaagtg atacggtgga gcaattggaa aggcttccgg gcgggactac aacgcaggaa 600  
 attaacccac cggagagggc aaaggtaaatt gcaaggatcat ga 642

<210> 151  
 <211> 3042  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 151  
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 aaatgtaggc tatttcacta caataaagtt catggactta gcctttctag tgaagggaaa 180  
 attttggcct atgggtgcaag atcagtaaca atagtggaa ttgaagacgt tttaaagaaa 240  
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ttgacaact tgcaaatata ttgtttaaca tgttataata aagtgctaata ttgtgattta 360  
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<210> 152  
<211> 933  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 152

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gactacgctt ccaccttcgg tattgccgtt caaccaatct ccactacatc cagcgcatca 180  
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caagtccaag ctgctaccac tactgcttct gtctctacca agagtaccgc tgccgccgtt 300  
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 gccgcccgtt ctcaaatcgg tgatgggtcaa gttcaagcta ctaccaagac taccgctgct 660  
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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 153

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 gtcttgggtca gaatctcgat tctcttcac catgacgaga atgcgtatac gcagagccaa 180  
 tataatctgt atacgggacc tttgacatta aggtttctgc agagagtta ttacatgcat 240  
 tttcatatat atatttttaa cgccattcct ttacggtatg taaagaaaaa tgatccaatg 300  
 agcggccctt cgtacgagat gagatataat aagaatgaaa gatag 345

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 <211> 375  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 154

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 cttccgaata acaaagtggc cgaaacaagc gccaacgtcg accattttgc caccgtgtca 180  
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 cccaatatca tcgcgcattt atttgagtca ttctctgcgc ctttattatt aaaagtctgt 300  
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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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 ggttcgggcc attcttctga cttagcaaag tcattagaag actatcggcc tcctgatgaa 180  
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 cataggaaaa agattctctc gaagtttgtt ttgaacaact tcttcattgc ttgtgtgtgt 360  
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<210> 156  
<211> 1761  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 156

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gtagatttca ccggtgaagg tgccaaatac acaactgcta cggagggcaa tgggtgtgca 180  
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acgagaagat taactaaaat ccttactggg tctgttaacg agcctgaccg tgtagaggtt 300  
gattatacca attgtgcgcc catgggtggt gacagacctt acctccatc gttgccgagc 360  
agagacctgt acgaggttac ttttgatggt cctaacgacc cactacatcc atttaactgg 420  
cccatgaaga agaaagtgt gctatgtctg gtcttatgtc tggattctat tgccattgct 480  
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gaagttgtcg ccattttggg tatcacgctt tttgttcttg ggtttgcggc ctcaccggtt 600  
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 <211> 810  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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 <211> 2970  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 158

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 ggggtccctc atattctaga gcatacaacg ttgtgtgggt ctgttaaata tccagttagg 300  
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 ggttggaggt tggagcataa aaacatcaca gaccgggaga gtaacattgt tttcaaaggt 540  
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 <211> 1764  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 159

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 aaaatctaca gattttggtg ttag 1764

<210> 160  
 <211> 3165  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 160

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<210> 161  
<211> 309  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 161

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cagtacataa aagcacgtat gaaagataag accttcttct atacgaagca attccgtaca 180  
gccaaaaaca aatttttctt tcctctgtac cattgggagg ccactcatat taacgttgac 240

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 tccgcctga 309

<210> 162  
 <211> 2835  
 <212> DNA  
 <213> Saccharomyces cerevisiae

<400> 162

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 aggttcgctt ccggacgagg atttaagagt cttgtcaagt ccaaaccctt cctgcactgt 540  
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<210> 163  
 <211> 1023  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 163

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tgtgggtatga atgtcgccaa gtacatcctc gaaggtaaga ttgatgctgg tattggtatc 480
gaatgtatgc aacaagtcga attggaagag tacttggcta agcaaggcag accagcttct 540
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taa 1023
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<210> 164  
 <211> 2781  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 164

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 ggtaaggcaa aagatcaaga tttagagcagt cttctagata aatgcatcga tatttttatct 180  
 atttacaaga agaactcgaa agatatcaaa aatattatat cgtgcaaaaa taaggggtgca 240  
 atgattagtt caaatccgt aatgattatt caattaaatt atgtttacta caaggtaatt 300  
 cacattattg taacaaccaa tattcctcat ttaagtgaat tcgccaagat taaattacat 360  
 aagagcacga gtgatgaggg caacggtaat aacaacaata atgaatttca actcatgaac 420  
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 ttcattaagt cttccataaa acaaacaaaa ttgaaccatg agcaagaaga atgtaacctg 540  
 atgagaacgg gttcctatat cacttccaat caattaaact ccctaataag ttcacagca 600  
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<210> 165  
 <211> 1464  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 165

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 tacatcccc tatectacac tccaaattca ggtttttcct tggaccaaatt gccagctggg 180  
 attatggata ttgctgcgca attggttgca aatccaagt atgactccta caccactttg 240



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tctagactgc ttccagaatt agaagcaatg gatgcttctc taactacctc aagttctgct 360  
gccacatctt caagtgaagt tgctagctct tctattgctt catccactag ctcttctggt 420  
gcaccatcct caagtgaagt tgctagctct tccgttgac catcctcaag tgaagttgtc 480  
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tgtcaagcta agaagtctgc taccgttggt agcgttcaat ctaaaactac cggtatcggt 1380  
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gctgttgccg ccattgctact atga 1464

<210> 166  
<211> 534  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 166

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tctatgcagc ctacgctgaa cccgcaaacg gaaacgctgg caacagattg ggtgctgctt 180  
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 gctcctacaa accctcggaag agtttactgc aaaaggggta aagggttacc gtttgatacc 300  
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<210> 167  
 <211> 1395  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 167

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 attctagagc ctaatgtttt gacaaagtcc gataaggacc atattgcatt ttacggtata 180  
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<210> 168  
<211> 363  
<212> DNA  
<213> *Saccharomyces cerevisiae*

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<210> 169  
<211> 1845  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 169  
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attctgccta tggatggaca gtacagaaga acatacattt ctgagaatgc attgatgcct 180  
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<210> 170  
 <211> 510  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 170

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<210> 171  
 <211> 609  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 171

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acggaagtgc ggtcattcta cgaagacgaa aagtctggcc taatcaaagt ggtaaaattc 180
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aacagaggat actataatga gttgagtttc cgtgtcctgg aacgttgtca cgaaatagcg 480
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<210> 172  
<211> 1947  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 172

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tcaaactgta tcaagtttcg taccgaatgt gtattcactc aacaagactt aaggaacaaa 240  
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<210> 173  
<211> 1461  
<212> DNA  
<213> *Saccharomyces cerevisiae*  
<400> 173

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atgtacacta gtgggaagga gatcaggaat aagaaaggta atttaattag ggccgcttct 180  
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tttgggcccc aagcccaaag aaagagacca cgtcttgctg catccaatct agaggacttg 480  
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ttaggactaa tggggaacca ggaagacaaa gaaaatgggt ggacctccgc agcaaaagaa 600  
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tccgtggaag agtatatgaa gaaggaaaca ccacacaagc atttaattta tgttcttaat 780  
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 ccaggtgttt taaaacgttg tcaggtaaag cacttggaag gaacttacga gatctcagga 1260  
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 ggtggtgagc ctgatgagtc tgggtgtttct aagcaaatac tgaatgattt taatagaggt 1380  
 aaaatccctt gggtcgtcct tccacctgaa aaggaagggg aagaaaaacc aaagaagaaa 1440  
 gaagttgaga agacggcata g 1461

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 <211> 1074  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 174

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 ggtatctgcg gctctgatat tcattattat agaagcgggtg gtattggtaa gtacatattg 180  
 aaggcgccaa tgggttttagg tcatgaatca agcggacagg ttgtggaagt tggatgatgcc 240  
 gtcacaaggg tcaaagttgg tgaccgtgtt gctattgaac ctggtgttcc tagccgttac 300  
 tetgatgaga ccaaagaagg gagctataac ctttgccac atatggcatt tgctgcaact 360  
 cctccaattg atggtactct tgtgaagtac tatttatctc cagaagattt ccttggtgaaa 420  
 ttgccagaag gcgtcagtta tgaagagggc gcttggtgctg aacccttacc agtcggtgta 480  
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<210> 175  
<211> 3306  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 175

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ttttcgtcaa cattcagtga tgatgatcgt tcggaccttg ttgctgtacc taatgagtcg 180  
ccgcatgcat tttcgtataa tcccatatca ccaaactcac tgggagtaag gttgaccatc 240  
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aaagcacccg taatagcata cccccctca cttagacaca caagaaactt aacagagact 360  
gccacgttat cagcatcgcg agatccgtta aatgggtctc taatttcacc attagtatcc 420  
aatatgccat ctctgctag tagaccgtg atacagagag caacgtcctt aatgggtgtg 480  
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<210> 176  
 <211> 2487  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 176

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 <211> 393  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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<210> 178  
 <211> 2304  
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 <213> *Saccharomyces cerevisiae*

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 gatttgagaa ctcaaaactg gaagttgcaa aaggaggctg gtgttgatat catcccatcc 180  
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 <213> *Saccharomyces cerevisiae*

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 <213> *Saccharomyces cerevisiae*

<400>

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 <211> 669  
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 <213> *Saccharomyces cerevisiae*

<400> 181

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 <213> *Saccharomyces cerevisiae*

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 <211> 1770  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 183

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 <211> 2196  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 184

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 <211> 2790  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
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 <211> 2694  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 186

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<211> 978  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 187

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caatattggg tgacatttgc tccatctttg gcacttaagc cagacgctaa caagaatagc 180  
gattcaaagg cggaggaccc gttcgccaat cccgacgaag aactagtggg gactgaagat 240  
ctaaatgggt acggagaata taagctgcta ctcaacaaat ttctgtggg ccctgaacat 300  
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gaaaggatc tgggtcttta taattgtgga cctcatagcg gttcctcaca agatcacaaa 480  
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<210> 188  
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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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 tctatcaaag aacttttgaa acctttggag ttcgaattca agccaaggc cgtcagaggt 240  
 ttacactatt cagaggattt caagaaaaaa ttagagtttt tgaaatatca ggaacaagaa 300  
 cttgaatata aaagtatggt caagagaagc aagtctgtct tttcacttca agaagacgat 360  
 gaactcacgc cttcacaaat taataaacag attaaggaac aagttaccac tgttttcaac 420  
 gttcttgtaa gtgtcatata ggttgttgtg gccatttggg actggaccgg atcttcaaca 480  
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 gcagatgtgg ttgtgtataa cagctatctg aaaaaactcg aagaagcaaa agtaaaagaa 600  
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<210> 189  
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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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 ctttgttttg tcgtcacaat gggtagttcc ctatatgttt ctccgtacc agaattggta 360  
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caacatgcgc aaaatcgtaa tgaaccatt tccaatagtt tatactcagc tatcaaggat 1920  
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<210> 190  
<211> 1668  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 190

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gtgcatggaa aagccccgat gctaattggc aataatgatg tttttactat tggaccttat 180  
agggcaagaa aagatagaat gcgggtatct gtcttagaaa agtacgaagt tattggctac 240  
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acgcaaccaa aatcaagctc ttcaatggac atgcaggcaa atacaaacgc attaagaaga 420  
aacttggtta aggatgaagg agtgaccccc ggaagaatac gaactacgag ggaagatgta 480  
tccccgcact ataattccca aaaacaaacc ctcatataaa aaccgctgac ggtattttat 540  
gccattaaaa agttcaagac agagaaggat ggcgtcgaac aattgcatta tacgggaata 600  
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 acgaaaaaca atacacaagc ttcaggaatc accgcaggtg ccgctgcaaa tgcgttaggt 1560  
 gggcttggtg ttaaccgtag aattctggcc gcggcagcag cagccgctgc tgcggtgtca 1620  
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<210> 191  
 <211> 597  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 191

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 caccaatcaa gaccccacca aaggccctcg acaatgccag caacgtcctc atcccaaaca 180  
 tatgtcact cacactctta tacgcctaca agttcccaac cacggcctcc accgaggcca 240  
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 ggcgtgctat gtggtgaatg cagaggggtc ggacgcacca gattcctgtt ggacgaagat 540  
 atatgtcctc tttgtcatgg tgtaggcaga attatcacc agcctcaacg ctattag 597

<210> 192  
 <211> 981  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400>

192

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<210>

193

<211>

3303

<212>

DNA

<213>

*Saccharomyces cerevisiae*

<400>

193

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 taa 3303

<210> 194  
 <211> 3108  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*



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2922

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 <213> *Saccharomyces cerevisiae*

<400> 201

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<213> *Saccharomyces cerevisiae*

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203

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 203

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<212> DNA  
<213> *Saccharomyces cerevisiae*

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 gagaataata tatacaactt gggactttta gaggagtttg tcagcagtgg tgacctgact 2880  
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<210> 207  
 <211> 1515  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 207

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 gatgagaaga agcccgtttt cggtaaccat tccgaggaca tacagaccaa attggacaag 180  
 aaattaggac ctgagtatat ctccaagaga gttgggtttg gaacaagcag gattgcatac 240  
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 acggaggtaa aaagtgtagt tatcgatttt ttggatgagc gacagggaaa gtttagcata 360  
 ggggtgactg caattgttcg tgttacgttg actagcggga cttataggga agatattggg 420  
 tatggtaccg tggagaacga aagacggaaa cctgccgctt tcgaaagggc caagaaatct 480

gccgttacgg atgccttgaa aagatctttg agagggtttg gtaatgctct aggaaattgt 540  
 ctttacgata aagattttct ggcaaagatc gataagggtga agttcgatcc gccagatttt 600  
 gacgaaaaca atttgttttag gccaacggat gaaatcagcg aaagctcaag aacgaatact 660  
 ttgcatgaaa atcaagaaca acaacaatac ccgaataaaa gaaggcaatt gactaaagtt 720  
 acaaatacca atcccgactc gacgaagaac ctggtgaaaa tagaaaatac agtaagtcga 780  
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<210> 208  
 <211> 1092  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 208

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 ctgaacgaag ctatcaacc agacagcggg ttgaacaaaa gtaccaagaa cctgctgttg 180  
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ccgctaccat tcccaagtac atggcacacc gtggatgatg acttccggca cttagacgcc 1020  
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cgtaaccagt ga 1092

<210> 209  
<211> 1800  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 209

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cggatgtacg aggtttcttt gcccgaattt attgacatca cctggaatgc aggcggtgga 180  
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gcagaaaact ggactcccgt tgaagggtgc ttccagtatg ccaaggactt gattaagtat 420  
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<210> 210  
 <211> 2772  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 210

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gacttaatca acaacaaatc gttcacgttt gaatacgagc atcgcaaaaa tattgctgcc 180  
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catgatcagg aaaaaatcta cactgtaagc aaagacggtg ctgtctttgt ctgggaattt 660  
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gtagatattt cgaaatacag ctggagaatc acaaagaaac atttttttta cgcaaacc aa 780  
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 gagaacgatg tagtcatgga atctgacgac gaggaaggat ggattggttt caatgggaag 2700  
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 gagcttcctt ga 2772

<210> 211  
 <211> 369  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 211

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 cccaccata gtgatgtaac atgcagtaac gcacggcggg ccgaaagtcg gactttaccc 180  
 cagatttgta gttgtatcct attggatcac gggcgacgga caagaccga agtgcggacc 240  
 ggcattggta gcttgacgg aagctttaa ggtttccctt gtttcggcat tagaagaggc 300

atttcgcacg ttttaccggg tcagaaactt cgaggaagct gtgacaattg gaaaaaaagg 360  
caaaactaa 369

<210> 212  
<211> 2610  
<212> DNA  
<213> *Saccharomyces cerevisiae*  
  
<400> 212

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agttcttttc aatcctcttt taatactgac caaaaaagcg cgaacaatgg aagtactgtg 180  
agaagaagca taaggctgat ttttagaaga gcagccgaat tgcctagagt ccatatgggg 240  
cctcttactt attcacatgg gataaatgag cttgttaaca agaaattaag aaaagactgt 300  
gatctcagca cgctatgtcg cgtattgcaa agaggaatca ggatgattag gatgacaaga 360  
agaagaagga agttctatga atttaaatta atcaataaca acgggcaa ataatatggaaa 420  
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 <211> 1815  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 213

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ggcgctagcg caggcggctg gggctcttca agaagcagag ataactcttt cagaggcgggt 1740  
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tcttcttggt ggtga 1815

<210> 214  
<211> 1203  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 214

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cgtgctcaaa gacctggtag catgatcat acggaaggta cgtttatttc cctcaagcc 240  
ggcggctatg acaacgcccc tgggatttgg tctgatgagc aggtcgtga gtggaagaat 300  
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tgggcatect tcccagacgt attggcaaga gacgggttac gctatgactg tgcattctgac 420  
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cagttcttgg atccacattc taataagagg accgacgaat acggcggaac gatcgaaaac 660  
agggcccgtt ttacactgga ggttgctgat gctcttatcg aaactatcgg tcctgaacgg 720  
gtgggtttga ggttgctgcc gtacggcact tttaacagta tgtctggggg tgctgaacca 780  
ggtattatcg ctcaatattc gtatgttttg ggtgaattag agaagagggc aaaggctggt 840  
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<210> 215  
<211> 354  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 215

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aagctgcagc atacgatata tatacatgtg tatatatgta tacctatgaa tgtcagtaag 120  
tatgtatacg aacagtatga tactgaagat gacaaggtaa tgcattcattc tatacgtgtc 180  
attctgaacg aggcgcgctt tctttttttc tttttgcttt ttcttttttt ttctcttgaa 240  
ctcgagaaaa aaaatataaa agagatggag gaacgggaaa aagttagttg tggatgtagg 300  
tggcaagtgg tattccgtaa gaacaacaag aaaagcattt catattatgg ctga 354

<210> 216  
<211> 1575  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 216

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agagatgaga aaggatgattg caatgaagaa aaggattctt ccaaagattt ggggagggta 180  
ccgtcgaaga tgaaacgagc atatgatggt gaaacagtta ttaaagaggg agattcgcac 240  
gtgagtcgc tagcgcagca gggaaagcag cccacagacc tcgcatataa cagcagatcg 300  
aagatatctg gttctaattt gcattttattg gttcctagag ttgcgtctac agactatatt 360  
tcgaataaag aggttcacac ggagggcctg tttgccggct atcgaccctt gtttctgggg 420  
aactcagggtt ttccgtctga tgcaagaaag ggtaaaaact ttcattgagtt agacgacgtt 480  
cttcccaata tacaggtagt ggacgcttcc gagaaagatg gcaaactcaa tgtgcaggag 540  
attattgagg acttaciaaag aacaagtttg agagaaagca ttcattagtat ggaacagtta 600  
ccatcttcgc acaaacgtaa acccgtaata ccgtgggacg catctataag tggcatgggt 660

tataatgaca tgcctttcaa atatgtgccc aaaaatatta ttctgaaaat gaagccattt 720  
aaacttttgc gtattgagag aaaaagtcaa gcgaagaatg caagaaaagcc tactatgata 780  
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tcaagtgcaa atacaagtaa aagacagaaa atgtttaaag caagaagcga ctttgaacat 960  
aaacagaaaa attatgcata caaacacaca tttatcaaaa atgatcagga actgttccgc 1020  
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cataaggacg ttcaagtcag cttcaatgac aagtatgttg ttactaggag cggcgtgagg 1500  
tatacgaggt atcccactaa tttgaataca caattattgg aaactgcatt tgaagaatgg 1560  
gactactatg agtga 1575

<210> 217  
<211> 1557  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 217

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aatgctagta ttcccaaaac tccggaggac atctctatct tgcccgtcaa tgatgaacca 180  
ggttaccttc aagattcgaa gactgaacaa aactatcctg agcttgccga tgctgtgaag 240  
tcacaaacaa gtcaaacatg cagcgaagaa cataagtatg ttatcatgat cgatgccggc 300  
tctaccggtt cccgagtaca tatatacaag tttgacgtct gtacttcccc acctacatta 360  
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ggtgcecgcta actcccttga cccattactg aaagtagcaa tgaactatgt ccctattaag 480  
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 gctgcegttt ttgacttagg cggaggtct acacaaattg tttttgagcc tactttccca 780  
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 aactctgttc ttgtggaaaa tgcattaaaa gacggcaaaa tattgaaggg tgataacact 960  
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 ccaccatgct ctttcaatgg gggtcaccaa cttcttttag ttcgtacatt caaagaatcg 1200  
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 caaagagaat tgagaactgg aaagaaaatt gccataaag aaatcggttg gtgttttaggt 1500  
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<210> 218  
 <211> 552  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 218  
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 ctggctggag cagcaactct gttagagaca ataacgttct tgatttcagt caatggttcg 180  
 ttagtgaaaa cgaaaccaac gttacctttg acaaaaggca acaacttttc gaagtctggc 240



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acaccaacaa cgaacaaaga cttgtattct tccaagtatt ctcttaattt agcaaagtat 420  
tcagctttct tttcacgaat gcctcccatt tcaaacttat tatacgtatt tattagactg 480  
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atcgagaatt ag 552

<210> 219  
<211> 663  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 219

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attgagacac aactagaggc gtatttcagt gtgcttgagc agcaaggcat cggcatggac 180  
tetgcgttgg tgacgccaga cgggtatcct cgctcggatg tcgatgtatt gcaagtcact 240  
atgatcagaa agaatgttaa tatgctgaag aatgatttaa atcacctttt gcaaagatca 300  
cacgtcttac taaaccagca ctttgataat atgaacgtta agtcaaacca agatgcaaga 360  
aggaataacg acgatcaagc tattcagtat accatccctt ttgcatttat cagtgaggta 420  
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ggtaatgtgc atgcggcaaa cactctaaa cttcaaaaca ttcagatggg tgtaatgaaa 540  
aatgaagaca ggccacttcc cgtccttctc ttgagagaag ggcaaactct aaagacatcg 600  
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taa 663

<210> 220  
<211> 2295  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 220

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tccacccacg ctcccataga aaatgacacg tttttcgagg atgctgataa agtcagtttc 180  
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ggttacaata ccattcgttt acccttcacc tgggaatctc ttgaacatgc tgggccagga 300  
cagtaagatt ttgactatat ggattatata gtcgaggtac taaccaggat taacagcgta 360  
caacaaggta tgtacattta tttggaccct caccaagacg tctggtctag gtttagcggt 420  
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gccaccgatg ctgcaatctt acataattat tatattgacc caaaaacggg caggggaagtt 540  
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tgcgcaagaa ttaaagaaaa ggctcctgag ttgtttgaga gcaactgcat tattggatta 780  
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 ccaagtttca taaaaccaga taatcattta gatttggata gtccctcgtg cacttttaaag 1920  
 agcgacttgt caggggttcag agctcttgat gctataatga gaccattccc catacaaatt 1980  
 cacggaagat ttgagtttgc tgagtttaac ttatgtaata aatcctacct tttgaaatta 2040  
 gttggtaaaa cgacacctga acagataact gtccctacat atatttttat accacggcac 2100  
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 gactaccagg ttcttgaatg gtttcacgag cctggccatc agttcattga aatttgcgca 2220  
 aaatcgaagt caaggcccaa caccctgga agtgacactt cgaatgactt accagcggaa 2280  
 tgcgttatca gctaa 2295

<210> 221  
 <211> 3123  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 221

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 gaactagata tgaagcccg tgacaagatc aaagtaataa ctgatgacga agaatacaag 240  
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 aggatatata gtccattaac caatgaagat cctcttcttt ccagcacttt tatcagtga 420  
 aacgattcaa acagtgaact gccaaccccg caaccaattg aaaccgccc ctctatttcg 480  
 agaactgcc aatggaaagat cgaaagaaac ttgtctttaa agaatacaat gagtgacata 540  
 gacaatgcac tactggagtt taaagacgac tctataggtc caccagatcg ttcatcaat 600  
 tcgggcagag acgaggaaca tagcattacg catgaaacaa ttctatcagc cactgatgga 660  
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<210> 222  
 <211> 2682  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 222

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 gaaaataatg acacgtttta tgataaggac ttagagagca attctgtagc aaagcacaac 180  
 gcagtgaaca gctcaaaggg cgtaaaaggc tcgaagattg actactttta tccttcagat 240  
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aaggaaagtt ccaccaata cgtcacaat tctccaaga aaatagaaac aaacgttcaa 1920  
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attcgccaca gaaaaaaatc tgaccgtcca tggaatgatc ctgggtccatg ggaagcacct 2220  
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<210> 223  
 <211> 1908  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 223

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 cacgagagac ccagaaaagt ggaattcact aaggacgatg atgaggagcc atctgactct 180  
 gaagataaag aacatggaaa gttccataag aagggccgca agggccaaga caaggagtct 240  
 ccggaattca acggtaaacg tgcaagtggc tctcatggga gcgcccacga gggaggaaaag 300  
 ggcatgaagc ctaagcatga aagttccaat gatgatgata atgatgataa gaagaagaag 360  
 cctcaccata aggggtggctg ccacgaaaat aaggtggagg agaagaagat gaaaggtaag 420  
 aaagtcaagg gcaagaagca ccacgaaaag acgttggaga aaggagggca ccacaacagg 480  
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 gaaaacgtcc agcaggcaca acttcaatcc gtagagaact tatctgccga agacgctttc 660  
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<210> 224  
 <211> 3189  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 224

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 gagcactcaa gcacatcgcc tgcccccgag aactccgaaa cacataatag gaaaagaaat 180  
 agaatattgt ttgtctgcca ggcttggttg aagtcaaaaa caaagtgtga tagagaaaaa 240  
 cctgaatgtg gtcgatgcgt caagcatggg ttaaaatgtg tttatgacgt atcaaaacag 300



ccagcaccac gaattccgag taaagacgcc attatatcaa ggttgaaaaa agatatgttt 360  
tattggaaaag ataaagctat gaagctacta acagagagag aggtgaatga atcaggcaag 420  
agatcagcaa gtccgatcaa tacaaacaat gctagcgggg acagtcctga taccaagaag 480  
cagcataaaa tggaacctat atatgaacaa agtggttaacg gggatataaa caatgggtacc 540  
agaaatgata ttgaaatcaa cttgtataga agtcatccaa ccatgatcat gagtaaagtc 600  
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cagcttgctg tactcctgtc ggacttagat aacttgacga tgacatacta tggtagtttc 1860  
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 acaccaattg tcgataactc atctggatca caacttctta atggtttcga tagaggccaa 3060  
 gogaataata ctctttttcc aggttatttt ggaggttttg atttatttga ttatgacttt 3120  
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 atcaattaa 3189

<210> 225  
 <211> 1077  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 225

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 tttgcagcat tcgttaagca attgagcaaa tataacttcc agaaggcggg ccgcccggac 240  
 tgcgtggagt tttccaacat tcattttcaa aaagataaca ttaatagcct ctacttggtt 300  
 aaagctcatc agtctgccgc cactcccaat gtcgccgcgc tcaataatat gaataagcag 360  
 tgtacttttc actgggaccc tttcaaagtg aactccattc taagcaaggc catcggaag 420  
 ccttccttcg agaaattagt gaaaaatgtt gacaggcttc agggcaatct tgatgagctt 480  
 aagtcgacaa acgcagatag tctgcttatt ataagggaaa ttaacgccag cttacagaca 540  
 atctcctacc accagtttca cgcctacca accgctaact tccttcaaga aaattttgaa 600  
 gccatcaaaa aggttgatg ccgggactct tgtctacaac accagcaacg ccaaccaaag 660  
 cgccccaaac gctactcgtt gctgttacta ataccaaacg catccgaatt gtcagaaaca 720  
 cctttgatgc gcttcgccgg cgtgttcgaa tttatgaact gctctttgga tacggccact 780  
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 aactactctc gctattatct ccaccatttt ttgcagttgg ggttcagtga catcctagtt 1020  
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<210> 226  
 <211> 1698  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 226

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 actaggacag gcgcaaatca attcaataat aagtctcggg ctaaaccaat ggagattgtg 180  
 gaaaaactgc aaaagaagca aaaaacgtcg tttgagaatg ttagcactgt catgcactgg 240  
 tttcgaaatg atctacgttt atatgataat gtgggactgt acaaaagtgt tgcgctcttc 300  
 cagcaattga ggcaaaaaaa cgcaaaagcc aaattatatg ctgtttatgt catcaatgaa 360

gatgattgga gagcccatat ggatagcgga tggaaattga tgtttataat gggggcggtta 420  
aaaaatttgc agcagtcctt agccgaatta cacatacctc ttcttctgtg ggaattccac 480  
actccaaaaa gtaccttata taattcaaaa gagttcgtgg agtttttcaa agaaaaatgt 540  
atgaatgtaa gttcaggaac aggtacgata atcactgcta atatagaata ccaaacagat 600  
gaactgtacc gtgatattag gctgttagaa aatgaagacc atagattgca attgaaatac 660  
taccacgact cttgcattgt tgctcctgga ttgatcacta ctgacagagg caccaactat 720  
tctgtgttta ctccatggta caaaaaatgg gtgctatatg taaataatta caaaaagagt 780  
acctctgaaa tttgtcattt gcatataatc gaaccattaa agtacaacga aacttttgaa 840  
ctgaagccat tccaatattc attaccggat gaattccttc aatatatacc taaatcaaaa 900  
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caaatgatat tcgtcaaaca atgggttccc gaattgattt ctccgaaaa taagcgtcca 1620  
gaaaactatc caaaaccttt agttgattta aagcatagta gggagcgtgc tttgaaagtt 1680  
tataaagacg caatgtga 1698

<210> 227  
<211> 2772  
<212> DNA  
<213> *Saccharomyces cerevisiae*  
<400> 227

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acgccaaaccg gtgacttaaa cgatgacgct gactctcaga ctccagggtcc aatcgctgat 180  
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gaaaaggcca tagatgggaa caatattaac gaggaacaa ttgagttaga cgagttatct 360  
cctcaaggga aaaccacctc tttcaataag aattttatac gtaagaaatt ctttgaatca 420  
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<210> 228  
 <211> 3246  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 228

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 gacgcaaaag ccactccaca aagaagcact tcgaatagaa acgttggcga tttacttttg 180

gaaaaaagaa ccgctaagcc tatgattcaa aaggccttga cgaatacggg taatttcatt 240  
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 gctaaagagt catccaaagc ccaaaaaaat ataatacaaa agggaaatcaa ggacttttaa 540  
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<400>      229

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<210> 232  
 <211> 378  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 232

atggaaaagg atgaggagga tgaagaatct gaagaagcag aggaagagct gctgggtgctt 60  
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 gtatgtgaca cgagggacct acttgatgtc gatgaagtaa gggaagatga gtcagcactt 180  
 gaggaagaaa ccatactgga tgacaaaatg gaacttgaag aactaactct acttacggaa 240  
 gaacgtgcag tagatactgc tgaagaatc gaagatgatg attgcacgaa aaattgtgcg 300  
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 aaagacaaca tactatga 378

<210> 233  
 <211> 3648  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 233

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 caactatatt tccagcaata tgatcgttac atcaaaggac ctgagtggac ttttgtctac 180  
 ttggggacat tgggtatcctt gaacatccta gtcagtgtta tgcttgcttg gaatgtcaag 240  
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 tatcaagggt agccattcag agaaaacatt aggagtaaca aaggatgta ttatgggttta 3420  
 ttgggtgtga caggtttggc acttgcaagt gctactgaat tttacctga gctaaacgaa 3480  
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 ctgattttct ttggtagttg ggggtgtcag cattttttca agtttttctt catggacgac 3600  
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<210> 234  
 <211> 1659  
 <212> DNA

<213>      *Saccharomyces cerevisiae*

<400>      234

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aagaaaaatg tcattccgtt ggcaagcaaa atggaagtgt gtcgaatga ggatgtgtct 180  
agtatgggta atttcataaa taaattctac acagagtatt ctttaccctc acataaggta 240  
ctgcaatcac tgcgagtcct tttttcatta gcaatgatga cgtatacagt aaccatagag 300  
attattctat ggcagattaa ggttgctgga atggacaagg aagttacttt cataacgact 360  
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tggcacaagt ttcgtaatac accaatgtca gacccagtt ttagaaacat caacaacagc 720  
aacaataaca gtaaattctt cttatggaca acagacgcct atatagagga aaaaatccaa 780  
gattatgaac acaacattga acaaaatgta caaatattaa gaagtttaga agaagaggtc 840  
ggagaaaact caacttttaa agcagagttg atggaaaaaa tcgcttggtg tcaactggag 900  
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caaagattaa aggagctatt ggggtggaaag tttaccgtcc caaacattgt catagattct 1560  
 tgggtttgatg aagtctacgc ttttgcatgt gtgtttacct ttatttgcac aagaattgca 1620  
 gaacgaaagc tttccaccaa aaaagtcagt gttgaataa 1659

<210> 235  
 <211> 2121  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 235  
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 aactccatac ggagcacctc taattcgggt tctcagtcga tttctgcac ttccactaga 180  
 agtaactccc cactaagatc cgtatcagcc aaatccgatc ccttccttca cccaggtagg 240  
 ataaggatca ggcggagcga cagtattaac aacaactcga gaaaaaacga tacatatact 300  
 ggggtcaatca ctgtgaccat ccggccgaaa ccacggagcg ttggaacttc ccgtgaccat 360  
 gtgggggctaa aatcgcccag gtactctcaa ccaagatcca actcacatca cggtagcaat 420  
 acatttggtta gagacccttg gtttattact aatgacaaaa caatagtgc tgaagaaatt 480  
 ggagagttca agttcgatca tgtttttgct tcccattgca ctaatttgga agtttatgaa 540  
 agaaccagta aaccaatgat tgataagtta ttgatggggg ttaatgccac catatttgcg 600  
 tacggtatga ccgggtcagg taaaacgttt acaatgagcg gaaatgaaca agagctaggc 660  
 ctaattcctt tatctgtgtc gtatttattt accaatatca tggaacaatc aatgaatggc 720  
 gataaaaagt tcgacgttat aatatcgta ctcgaaattt acaatgaaag gatttacgac 780  
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 aggtggattg cagtttgtga caaaagtagg aaaattggcg aaactgacta caatgcaaga 1020  
 agctcacgat ctcatgccat tgtactgatt cgtttaacaa gtactaacgt aaagaacggc 1080  
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 ttggaatcac aaataaggca atataggaaa tacactcaaa aacttgaaga caagatcatg 1920  
 gcgctagaaa aaagtgggtc tactgcaatg tcgctaactg ggtgtgacgg cactgaagtg 1980  
 atcgaattac agaagatgct cgagaggaag gataaaatga ttgaggccct gcagagtgcc 2040  
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 gtcgtggata acgataaatg a 2121

<210> 236  
 <211> 1137  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 236  
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 aattatgtgt attttctacc ctcagctgtc cgtttgacgg tttcaaagga ttataccaag 180  
 tcgatcctgc cgtaaaaaaa tgttcttgat agtggatttg aagttatcaa agatacggct 240  
 gccagctttg atgataagga ggtagttttg gggtcagaca gggccataaa gtttgatata 300  
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 gataactata aagagtattt tgaaagagag gcttctcgaa tctcagatgc agatcacata 420

ctttttcttg gcggtggctt tgtaattgt gaactagctg gtgaattggt attcaagtat 480  
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 aaaaatggta ttacgttgta cttgaacaca gtaggggctt ctttagacac ctgccgaaa 660  
 cgtatttttc taggtgaggg ctcactctaa tatatagatg ctgatttgat ttacagagggc 720  
 gttggtatct ctccaaatgt gccggtcaac agtatttcag acctttgtga caagaaaggg 780  
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 attggtgatg taacgaattt tagatatcac ggattgggta aaagagataa ttgggttgat 900  
 gttttgacct gaaatgttat aagttcttta caagaaggaa cagaggctag tctcgttgat 960  
 gcagattgtc ttgagacagg acatgcccc aagtgtgtct cccttgggcc aaatgcaggg 1020  
 tttggccaat ttccactacc gttacttggg acgattaata ttccatcgtt tttaatttct 1080  
 agagcaaagt cgaagaatct tttctccgac aaaatggaac ctttattcaa aaaatag 1137

<210> 237  
 <211> 1047  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 237

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 tctgggtgtc gccacaccga tttgcacgct tggcatgggt actggccatt gccaaactaag 180  
 ttaccattag ttggtgggtc cgaaggtgcc ggtgtcgttg tcggcatggg tgaaaacgtt 240  
 aagggctgga agatcgggtg ctacgccggt atcaaattgt tgaacgggtc ttgtatggcc 300  
 tgtgaatact gtgaattggg taacgaatcc aactgtctc acgctgactt gtctggttac 360  
 acccagcagc gttctttcca agaatacgt accgctgacg ctgttcaagc cgctcacatt 420  
 cctcaaggta ctgacttggc tgaagtcgcg ccaatcttgt gtgctgggtat caccgtatac 480  
 aaggctttga agtctgccaa cttgagagca ggccactggg cggccatttc tgggtgctgt 540  
 ggtggtctag gttctttggc tgttcaatat gctaaggcga tgggttacag agtcttaggt 600  
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gacttcacca aagagaagga cattgttagc gcagtcgtta aggctaccaa cggcgggtgcc 720  
 caagggtatca tcaatgtttc cgtttccgaa gccgctatcg aagcttctac cagatactgt 780  
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 gataccagag aagccttaga tttctttgcc agaggtctag tcaagtctcc aataaaggta 960  
 gttggcttat ccagtttacc agaaatttac gaaaagatgg agaagggcca aattgctggg 1020  
 agatacgttg ttgacacttc taaataa 1047

<210> 238  
 <211> 1692  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 238

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 aaaggatatga gatgggctgg taacgctaac gaattgaacg ctgcctatgc tgctgatggg 180  
 tacgctcgta tcaagggtat gtctgtatt attaccacct tcggtgttgg tgaattgtct 240  
 gctttgaatg gtattgccgg ttcttacgct gaacatgtcg gtgttttgca cgttgttggg 300  
 gttccatcca tctcttctca agctaagcaa ttgttggtgc atcatacctt gggtaacggg 360  
 gacttcactg ttttccacag aatgtctgcc aacatttctg aaaccactgc catgatcact 420  
 gatattgcta acgctccagc tgaaattgac agatgtatca gaaccaccta cactacccaa 480  
 agaccagtct acttgggttt gccagctaac ttggttgact tgaacgtccc agccaagtta 540  
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 cacgggtctc atgccgaata taatgaaatt caaggttggg accacttggc cttattgcca 1500  
 acttttgggtg ctagaaacta cgaaaccac agagttgcta ccactgggtga atgggaaaag 1560  
 ttgactcaag acaaggactt ccaagacaac tctaagatta gaatgattga agttatgttg 1620  
 ccagtctttg atgtccaca aaacttgggt aaacaagctc aattgactgc cgctactaac 1680  
 gctaaacaat aa 1692

<210> 239  
 <211> 462  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 239  
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 ttagtatctc aaattctatc tcgttttgaa aaaaagggtt acaaactagt tgctattaaa 120  
 ttagttaaag cggatgataa attactagag caacattacg cagagcatgt tggtaaacca 180  
 tttttcccaa agatgggtatc ctttatgaag tctgggtccca ttttggccac ggtctgggag 240  
 ggaaaagatg tggttagaca aggaagaact attcttgggt ctactaatcc tttgggcagt 300  
 gcaccaggta ccattagagg tgatttcggt attgacctag gcagaaacgt ctgtcacggc 360  
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 gttgattggg aatctaatac agctaagtgg atttatgaat ga 462

<210> 240  
 <211> 858  
 <212> DNA

<213> Saccharomyces cerevisiae

<400> 240

atgtgggctc aattatcata tactagacca gaatctcaga agactgactt aacgtcggtg 60  
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<212> DNA

<213> Saccharomyces cerevisiae

<400> 241

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<400>

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244

<211>

243

<212>

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<213> Saccharomyces cerevisiae

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<211> 483

<212> DNA

<213> Saccharomyces cerevisiae

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<211> 2424

<212> DNA

<213> Saccharomyces cerevisiae

<400> 246

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<211> 1956  
<212> DNA  
<213> *Saccharomyces cerevisiae*

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249

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<400> 250

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 <213> *Saccharomyces cerevisiae*

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 254

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<400> 255

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 <213> *Saccharomyces cerevisiae*

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<400> 257

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 <213> *Saccharomyces cerevisiae*

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 <213> *Saccharomyces cerevisiae*  
 <400> 262

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 <212> DNA  
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<400> 263

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<211> 3402  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 264

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gcacagtttg ctgggcattt catggctaca aacagcggca aaagtattct ggcgaaagat 300  
gatagtacat ctcagaaaaa ggatgaagat gtcaagatag tacctgatga aaaagataca 360  
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gcttcgaaaa actccagaag ctccgcttct ggaggtggac agtcatcatc cagtcgatcg 480  
gattctggag atggaagttc gaaacaaaag cctccaaagg atgtaccaga agtatacccg 540



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 <211> 1815  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 265

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<211> 1725  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 266

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<210> 267  
 <211> 513  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 267

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<210> 268  
 <211> 2358  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 268

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 <213> *Saccharomyces cerevisiae*  
 <400> 269

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<212> DNA  
<213> *Saccharomyces cerevisiae*



<400>

270

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 271

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 <211> 1914  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 272

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 <211> 2892  
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 <400> 273

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 <211> 1632  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 274

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 <400> 281

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 ggggtgatga tcacggcgtc gcacaaccca taccaggaca acgggggtcaa gatcgtggaa 240  
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 gtcagagcca gtggtacgga ggatgcggtg agggtttatg cggaatgtaa ggactcctct 1620

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 <211> 1185  
 <212> DNA  
 <213> Saccharomyces cerevisiae

<400> 282

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<210> 283  
 <211> 987  
 <212> DNA

<213> Saccharomyces cerevisiae

<400> 283

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aaattactgt gcaaggaaaa taaactagca ttgttactac acggaagtca atctcacaag 240  
aacgctattt atcaaacttt actagcaaaa aggctggccg aattcggata ttgggtacta 300  
agaatagatt ttagggggcca aggtgattcc tcagataact gcgaccctgg ccttggtagg 360  
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<210> 284

<211> 1368

<212> DNA

<213> Saccharomyces cerevisiae

<400> 284

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<210> 285  
 <211> 1929  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 285  
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gttgattaa 1929

<210> 286  
<211> 2067  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 286

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<210> 287  
 <211> 2643  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 287

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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<400> 290

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<400> 291

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 <213> *Saccharomyces cerevisiae*

<400>

294

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<212>

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<213>

*Saccharomyces cerevisiae*

<400>

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<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 296

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 <400> 297

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 <211> 1548  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 298

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 <211> 2340  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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 <211> 612  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
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<400>

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 302

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<210> 303  
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 <213> *Saccharomyces cerevisiae*

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3252

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<212> DNA  
<213> *Saccharomyces cerevisiae*

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<211> 390  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 306

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<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 307

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 gcagttaaag aggaaacagt gttagaattc acaggtgaat ctccaaatat ggcaacagca 1980  
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2067

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<211> 2196  
<212> DNA  
<213> *Saccharomyces cerevisiae*  
  
<400> 308

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<210> 309  
 <211> 1587  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 309

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 gcaatgttca gcgattgtat gttcaacgca gcaccagata aagtagaag tctcagtacg 360  
 atgaagtctt ctggactctc gccaaaacac ccatttaacg tagtcgccac ctttaaagga 420  
 ccattccgcg agcatagtgt agaatacaag cctctcgatg gtggatactc tgccaaagac 480



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ttcaagcacc tagtatcgca taaataa 1587

<210> 310  
<211> 435  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 310

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taccaaatat ccgcttacca aacaagagca agacagaaag caagaacaga cgcacatacg 180  
cctttggcac gcaattatat caaatcaatg gacctaatg gtaagaaaac caagacatca 240

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 aaaaaactgg aaatcacatc cgacggagcg ctttcggtaa tgtgtgggtg cggtagcgtt 360  
 aaacgtttta atattggcgc cgatcctaata tacaggacct actcggagcg ggagggtaat 420  
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<210> 311  
 <211> 3270  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 311

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 <211> 351  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 312

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 ttagtttggg agagttgggt gacatattca attaaggaat catcgcttaa cgtagataga 180  
 aaagaccttg cattcaagcc gccggtcttt gctgttaaatt gtgaatcatt gacactttgc 240  
 tggctaaggc aattgttttt atcaggtggt tcctatttta tagagtattc caaatcgctg 300  
 tccaataaat ctacaagacc accatgttca cccatcgctg gatatgccta g 351

<210> 313  
 <211> 1146  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 313

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 ctatctcaac aagaaaaaga tgtacttttt gggagctctg aagataataa taaaaatcat 1080  
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 aagtaa 1146

<210> 314  
 <211> 609  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 314  
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 gctggagttt catatggtac ctttgggttac tgtaaaactt tgaattcttt ttctgtctct 180  
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catagctaa 609

<210> 315  
<211> 345  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 315

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cctttcttct ctttgtatct caaccacgtt ccatatatgt ggtcgtgttt caactttttt 240  
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<210> 316  
<211> 675  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 316

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<210> 317  
 <211> 1452  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 317

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 tccagactag atttgtatct gacaagaagg aggctggata cgtccatcaa ttacctaca 180  
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<210> 318  
 <211> 2157  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 318

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 <211> 3660  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 319

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 <211> 1746  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 320

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 acattgcaac aagaagcgtg gcaacaaggt tatgactctc acgaccgtaa gcggttgctt 300  
 gacgaagaac gggacctgct aatagacaac aaactgctct ctcaacacgg caacggtggg 360  
 ggagatatag aaagtcacgg acatggccaa gcaattggac cggacgagga agaaagacca 420  
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 ttgcaaaatt cgttgtcact agcatctatt ttctccgtct cacatttagg gacgaaagag 600  
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 aactag 1746

<210> 321  
 <211> 324  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 321

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<210> 322  
 <211> 2280  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 322

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gatttaggat ttccctgtgg taactgttcc aggttggaat tggtttgtaa tgttaatgac 300  
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 <211> 1023  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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<210> 324  
<211> 336  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 324

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cgtagcggagg actgctacgt ggaagcggat ttgaagatcc tttccagaac aagaaggagc 240  
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agcgtagtat ctcgagtttc cagaagttgc agataa 336

<210> 325  
<211> 2589  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 325

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<210> 326  
 <211> 2250  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 326

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<210> 327  
<211> 375  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 327

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gataaactac tcagttgtga atcggactgt ttcgcacagt atgtggatgg gcacttgtca 180  
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gaatcgcaaa caacacatcc gtcgctgcct ctagtgcag aagttgaaga ggtggctgtg 300  
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agaaaacgaa cgtaa 375

<210> 328  
<211> 921  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 328

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aataatgaag aatacataat actctttggc ggaggtcggg acctgatact aggctccctg 180  
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ggcacagacc tgtttatact caacagctgc attatcattt ggttcaatgg cttgggatat 300  
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caagatcaag accaggaaca ataccaagat ccaagcatgg cgtttgaggg tgcgcaagat 720  
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gacgggctgg cagacgatct ggatggcgac ctcgttatgg acaacgtggt ctctaggggt 840  
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aactccagag acaatgaatg a 921

<210> 329  
<211> 1302  
<212> DNA

<213> Saccharomyces cerevisiae

<400> 329

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tcttctccct ctgaaatcaa cagttattgg aacaagtatt ttggaataa gctactatca 180  
tgggacagtg ttttttttat caagaacata acttccaaaa acggaaaacc tcaatttgag 240  
catgaatagc cgttttctca gttgtggact ttttctgta ggctgtttat taaaagtaat 300  
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tcacagtttg ctagaactat cgctaaaaaa acatctctgt tgtttttctt aacgagtgcc 480  
gctggatttt taacaagcat atattctgaa ccattatctt ttttttttgc atttggtggt 540  
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aacaggaagt ttgtaaaagc aatatgtttc ccactattat caggatcatt aatgttttct 780  
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<210> 330

<211> 369

<212> DNA

<213> Saccharomyces cerevisiae

<400> 330

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aagatgtccc ttagttgctc tagagtgcac tcacgcagct tttcttgga atgtttttca 180  
aagttagtag acatgttttt ttttttcttt ctgctgtggt atgttagaag gactacagtt 240  
tattctaacc taaacctaga gctaccgtca aatatacagc tgtattcact ggatttgctt 300  
tatgtaattt atatgataaa aacttttcag ctcatcgaga aaaattttct ttctccac 360  
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<210> 331

<211> 2142

<212> DNA

<213> *Saccharomyces cerevisiae*

<400> 331

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tacgatttca aaatgaacca gcagctggct gagatgcagc agataagaaa caccgtctac 180  
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<210> 332  
 <211> 3108  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 332

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<210> 333  
 <211> 1923  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 333

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<213> *Saccharomyces cerevisiae*

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<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 336

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 337

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<400> 338

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 <212> DNA  
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 <400> 339

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<210> 340  
<211> 2193  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 340

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 <211> 2139  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 341

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 agcaacaatt tctatgattc tatgagtaag gtagagagcc cttccgtgag taattttgtg 240  
 gagcctttca tgaagtttga aaatgaattg ggccaataa ttaaccaatt aactttctta 300  
 cagcatgtgt cgtctgataa agaaattagg gacgcactct tgaactcctc aatgaaactg 360  
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2139

<210> 342

<211> 2295

<212> DNA

<213> *Saccharomyces cerevisiae*

<400> 342

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cagataaaga gtgatgaatt ggtcactaaa gataaggatg taacacgata tactgtacag 360  
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<210> 343  
 <211> 3165  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 343

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 tatctatccg tcattcagta ttacttcaat ggttggcaac tagattcaaa tagtgTTTTT 180  
 gaaactgctc caataaaga ctccaacact ctatttcaag aatgttccca ttactacaga 240  
 gattcctctc tagatgggtg ggtatcaatc accgcgcatg aagctagtga gttaccagcc 300  
 ccacaccatt actatctatt aaacctgaac ttcaatagtc ctaatgaaac tgactccatt 360

ccagaactag ctaacacggt ttttgagaaa gataatacaa aatatattct gcaagaagat 420  
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 <211> 2343  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 344

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<213>      *Saccharomyces cerevisiae*

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<213> *Saccharomyces cerevisiae*

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 <211> 2205  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 369

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 aaggaatata atgataaagt tgcttctatg ccacgtgttc cattgaagat tgtcttgaag 240  
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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 370

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 <211> 2733  
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<212> DNA  
<213> *Saccharomyces cerevisiae*

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 <211> 1869  
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 <213> *Saccharomyces cerevisiae*

<400> 374

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 375

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 <213> *Saccharomyces cerevisiae*

<400> 376

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<400> 377

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 378

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 <213> *Saccharomyces cerevisiae*

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

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 <400> 381

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<210>

382

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<400> 382

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<210> 383  
 <211> 1503  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 383

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<210> 384  
 <211> 369  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 384

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<400> 385

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 <212> DNA  
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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 387

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<400> 388

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 391

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<400> 393

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 <213> *Saccharomyces cerevisiae*

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 <213> *Saccharomyces cerevisiae*

<400> 395

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<210> 396  
 <211> 2040  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 396

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<210> 397  
<211> 2841  
<212> DNA

<213>      *Saccharomyces cerevisiae*

<400>      397

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aaattcaatc cgaactccac caccttagct tctatcgaag acagttttac ccagttcaag    180  
ttacattcca aggatttgat tgtgttgtct gcacatgcca ccatagggtc tactaagttt    240  
gatctaaaaa tttctcagga cactggaaag catttgtcga ttttcaactc tgaatctcct    300  
attcaattgt ccaacgattg cctctgatt ttgtccgtgc aatacgtggg taaaattcgt    360  
gacataaaaa cacatcatga taagactttt ggtattttca aaaccaattt tatggatcgt    420  
aaaaccggta ctgccaataa tcacgtcgtt gctactcact gccaacctgt ttccgctagc    480  
aatattttcc catgtattga cgagccttca aacaagtcca cttttcaatt gaacattgca    540  
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ggtttttcta ttggtgattt agaatttttg aaaacggaaa tcaagttgga aggtgatagg    720  
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<211> 1107  
<212> DNA  
<213> *Saccharomyces cerevisiae*  
<400> 398

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 aacagagcta atgacgtacc atatatgaat acccaaaaga aacaccacag atttagcgct 360  
 aacaataatt tgaaccagca aaaatacaag caatatcccc agtatacgtc caatccaatg 420  
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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 399

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1875

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<211> 858  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 400

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<210> 401  
<211> 951  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 401

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<210> 402  
 <211> 1722  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 402  
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 <211> 1008  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 403

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<211> 2964  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 404

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 <211> 1371  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 405

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 cctggaaatg tgcccttgtc tgacactaca gcgagattaa agaagttgaa tattgcggac 180  
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<210> 406  
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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 406

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 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 407

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 <213> *Saccharomyces cerevisiae*

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<210> 409  
 <211> 1254  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 409

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 ttaaaactgt ggggtccgct cgtaccgct cctgataacc taccgggact atacactcta 180  
 atcactatcc aatctgcagt gggtttcttt gccctttgga gactgagaag gctctacaaa 240  
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<210> 410  
 <211> 1350  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 410

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 atcatcatat ttgtgctggg tgatgtagga cactctccaa ggatattgcta tcacgtata 180  
 agtttcagta agttagggtt gcaagtcgag ctatgcggtt atgtggagga cactctaccc 240  
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 ggaggcgga catcagttat atttatggta aagaagggtc tttttcaagt tttaagtatt 360  
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<210> 411  
 <211> 1491  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 411

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 ttgatgcaac caggtgggtg tagagcattg agaagtctgg gtatgattca atctatcaac 240  
 aacatcgaag catatcctgt taccggttat accgtctttt tcaacggcga acaagttgat 300  
 attccatacc cttacaaggc cgatatecct aaagttgaaa aattgaagga cttggtcaaa 360  
 gatggtaatg acaaggctct ggaagacagc actattcaca tcaaggatta cgaagatgat 420  
 gaaagagaaa ggggtgttgc ttttgttcat ggtagattct tgaacaactt gagaaacatt 480  
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 gctgatataca agagttggat gattaaggat gtccaacctt tcattccaaa gagtctacgt 900  
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 gaagaacgtg gtttcttggg attaccaatg gctttattgg aaggtattat gattttgatc 1440  
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<210> 412  
 <211> 1431  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 412

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 gaaagcgatg tccatcgatt caattctctt ccatcaaaaa ttagtggggc cctaactagg 180  
 gaacaaatat actcctatca agtcatgttt aggattcaag aaattacat caaactgcgt 240  
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 gatgcccag gtaaaagaac gaataccgt gagcagaggt atagaaagaa actagaggat 360  
 gaacgtatta aacttggtga gatagcccta aagaccatcc ctacttcgt tcctccggat 420  
 gattacaaga gacctaccaa atttcaggac aagtattata tcccgggtga tcagtatcct 480

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gcaagtgact tacctccagg cgccatgaac tttgaggacc ccttgcactg tttaattatc 660  
gcgactcgg aagacaagat ccaaaaaggt ataaaagttt gtcaaaacat tgttatcaaa 720  
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<210> 413  
<211> 1290  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 413

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gtagggaaga gctcatccag gggtgccatg gatcaaaaat ctgatggaac ctttagactt 180  
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gatttcgaag accaagaacc cctatggact a ttaatgccg aatatgccac cactaaccca 360  
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gatcctgaat tcatagagtc gtacatttac ggagaaacat acatgacgga ggaggaagaa 480  
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<210> 414  
<211> 1023  
<212> DNA  
<213> *Saccharomyces cerevisiae*

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<210> 415  
 <211> 2535  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 415

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 ctaaaaatta ataatcctgc aattgatagc gtaacattga acaccgtcga taccgacatc 180  
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 gcgcagtgagg gttaa 2535

<210> 416  
 <211> 2259  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 416

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ccatccatcg cttatttagc agagtatttg aaaacatatc caaatacagt tttgacagtt 1260  
tctcagcacc gtgcattctt gaatgaagtg gctacagata tcatttatca acacaacgaa 1320  
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cagttaagac cactaaaagg ctttgtatca agaaacccaa gattacgtat aggctacttc 1800  
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gagcaaggta ctgtcaagag gttcgaagggt acaatttacg actatagaga ttacatcttg 2220  
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<210> 417  
<211> 2139  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 417

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atgccactga cagctgtcaa gccaaagggt ttgctgccac tggctaacgt acctctcatt 180  
gaatacacct tagaattttt ggctaaggct ggcgtacatg aagttttctt aatttgctct 240  
tctcatgcca accaaattaa tgactatatt gagaattcta agtggaactt gccttgggtct 300

ccatttaaaa ttaccaccat tatgtctcca gaagctagat gtacgggtga tgttatgaga 360  
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gagcctgccg catttgtctt agacaaatcc accagtaggt gtatttatta ccaagattta 600  
ccattaccaa gctctagaga gaagacttcc attcagattg acccagaatt gttggataat 660  
gtcgatgaat ttgtcataag gaatgacctc atcgattgta gaattgacat ttgtacatct 720  
catgtacctt tgatatttca agaaaat ttt gactaccaat cattaaggac agactttgtt 780  
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gaaaaaattg tagaacagag ttttgacaaa ccggatttga ttctatttag tgcattgggt 1980  
tctctatacg ataatgacat aattgaggag gatgtcattt ataaatgggtg ggataatgtt 2040  
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<210> 418  
<211> 336  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 418  
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ataagatttt cggcaataaa aggtaaatgc agccaaaaat caaaatactt cagaagaagt 180  
cgtagcgagg actgctacgt ggaagcggat ttgaagatcc tttccagaac aagaaggagc 240  
cgaaagctgc caggaactgt tcttgatttt ttaggaaaac aattaatagg tatctcgtct 300  
agcgtagtat ctcgagtttc cagaagttgc agataa 336

<210> 419  
<211> 2460  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 419  
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atagggggta gcaccccgac caataaactg aaattttatc catattcgaa caacaaattg 180  
acaagaagta cggggacctt gaacctgtca ttaagtaata cagctttgtc agaggctaac 240  
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gaaagcgtgg attctcgtat taaaagggtg tctccgttcc atgaaaatga aagtgttact 360  
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aaccagcgat ggtttccgaa aaatgatgct cgcactgaaa atacatctc atcctcttca 480  
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tctatggaca cttcggttata ccctgcgaaa ttgaggatac cagaaacacc agtgaaaaaa 600  
tcacccttag tggaggggaag agaccataag catgtccacc tttcgagttc gaaaaatgca 660  
tcgtcttctc taagtgtttc ccctttaaat tttgttgaag acaataatctt acaagaagac 720  
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acaaacagtt tacaacaatt caaatgatgt ttatacggca cggacgagaa tttcccacct 1020  
ccaatcataa tatcaagtca tcattcaact agaaagaacc ctcaacctta tcaatttcgt 1080  
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aattccaaaa ggcgctctaat ctcttcaaat aagttatcag caaatccaga ttcccatctt 1320  
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gaatcattat tttcagacat tacgaaagta ga acaaatg atttatttga ttttgaaaga 2100  
gacaatatca gtggtaatag taacaacgtt ggaacctca ctgttcataa caatagtaat 2160

atcaacaacc ctaatatgaa taatggcaac gataataata atgtcaatac tgccgctacc 2220  
aagaatcgtc ttattttgca taaaagttct aaaattcccc catgggtacc gaaatttctt 2280  
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aggcccacgg caaatcaaact cttacaaact gaggaatgcc tgtatgtaga aatgacacgc 2400  
aatgcagggtg ctattatcca ggaagacgac tttggacctt agccaaaatt ttttatatga 2460

<210> 420  
<211> 1668  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 420

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ttaatcttcg ttggtgctac cattgggtggg cttttattcg gctatgatac tgggtgttata 180  
tcaggtgttc tgctttcttt aaagcccgaa gatctatctt tggtagtttt aacggatggt 240  
cagaaggagc tgataacttc cagtacaagc gtcggatcat tttttggctc tattctggca 300  
tttcctttag cagataggta tggaagaaga attactctcg caatctgctg ttcaattttt 360  
atcctagctg caattggaat ggctatagca agaacattga cgtttttgat ttgtgggaga 420  
ttgctgggtg ggatcgctgt tggagtgtct gccagtgcg tccctctatt tctgagtga 480  
atttcacctt ccagaatcag gggttttatg ttgacattga acattattgc catcactgga 540  
gggtcaattgg tttcctatgt gattgcgtcc cttatgaaag agattgataa ttcatggaga 600  
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agaatgctat atcctactgc atctacatat catgtgaata gtaaaattaa gcagctgata 780  
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cagcaaatca ctggctttta tgcttttatg tactatgcgg caataatatt ttccaaattt 1140  
 aatataaaaa accctctact gcctccaatt ttgattgcct caacgaactt catattcact 1200  
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 ttcttatatt tttggtatcc agaagtcaaa ggtttgtcac tggaagaggt tggaagggtt 1620  
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<210> 421  
 <211> 2493  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 421

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 aactacgagg ttagttcact attttatggg acggaacggt ttcagattca aaaccatttc 180  
 caatcgctcc tagatttagt agaccttaat aatgaaaatg gtggcttggt attcgacttg 240  
 ataataatga gtgcgtcttc actgcaagaa atcccgagg tattgagaga tataaaacct 300  
 atgatgaata agacaacaaa gatactatct gaaagtagcg ggtttatata tttggagcca 360  
 ttcataagg cttcagttga tctttcgctg tcaaataatt tcagcatttt caccgattat 420  
 gacataagac ggttggacaa tggctcatac aaacagttca cgactgcaa tgccaaatcc 480  
 ttttctgttt cgatcgggtc aacgacatcc gttcacgaaa acagctattc aagtgatatt 540  
 attcctatct tgaatacatt tcagaaattg ttccaaaaac tgtttcctag ggacgttggt 600  
 actctttacg atcattctcc ctccgctttc ttggcaaaag aatgggaact agctttgcct 660  
 caaatatgtt tcgatccatt attaataata ttagaagaga agaatccatc aaccttggat 720  
 gaccacgttt tggccaaacc tcttatttca ggtttactag gcgagagctt attaataata 780

aaaaaaatgg gtatagccat gaacaatcca aattttcaaa atgaacagac tatattgaaa 840  
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 cataaggctt catctttgaa tattgactta ttgttattac agccgatatt attagcagat 960  
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 atcaatatta cgcaaccatc accaattcag accaactttg ctacgagtga taacctgtct 2340  
 gctgtaataa aactagggac accttctgaa gatacagttt cagctgcggc aacagccaat 2400



aatataagta caatgggaga tgaaagccgc aaagaggacg ttaaggaaaa aaagaagaaa 2460  
aagttcagtt tctttggaaa aaggaaaaag taa 2493

<210> 422  
<211> 1731  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 422

atgatcgctt taccagtaga gaaggccctt agaaagtccc tatggcaaag gcacagagcc 60  
tttattagtg gaatagttgc ctttattatc atcggcacct tcttcctcac ttcgggtctc 120  
caccagcac cacctcatga ggcaaagcgt ccacaccatg gaaaagggtcc catgcactca 180  
cccaaattgtg agaagattga accattaagt ccatcattca aacattccgt cgacacaatt 240  
cttcatgacc ctgccttttag aaacagctcc attgagaaac tgtccaatgc tgtagaatc 300  
cccactgtag tccaagacaa aaaccccaac cccgcagatg atccggattt ctataagcat 360  
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cgtgggttcta acgattgtaa gaacttgtaa attgccgagt ttgaagctat cgaacaactg 660  
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 gccattgctt ttgtttacga gtatatcggt aatgttaacg aatacgctta a 1731

<210> 423  
 <211> 2199  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 423

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 gaagtagcca ctgctaacca agtgatttgc gaaataaaaa ggccatgtaa ccatgacatc 360  
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cettataact tcttcgttgg tgtaggtgac attaatctta atttcttgcc caaacaatct 1080  
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<210> 424  
<211> 936  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 424

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 ggtgattacg tggatcgtgg ctactatagt ctggaaactt ttacgctttt aatgtgtctg 300  
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 gttgctagag agtttaacca cgtaaatgga ctgaacctta ttgccggggc tcaccaactg 720  
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 ccaaattact gttatagatg tggtaatgtc gcgagtgtaa tgaaggtcga tgaggatctg 840  
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<210> 425  
 <211> 3405  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 425

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 agatcatcta atctcaaaag aaaggcttat tcgaggcccg tttctaata taacggttac 360  
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cacaacaaca ataaggggtg cgacaccg cgacacccgg aacaacagtg gaagaagaac attcgcaagg 540  
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<210> 426  
 <211> 345  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 426

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<210> 427  
<211> 2841  
<212> DNA  
<213> *Saccharomyces cerevisiae*

<400> 427  
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cctatagaat taaataaaaac tgaaggcttt ttcgaagacc cgccgttcca tcttccttct 240  
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ccatccaaag ttgaccatat tgattttggc agaatacccg ctgtaccttt tagcctaagc 2760  
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<210> 428  
 <211> 1254  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 428

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 agggcccagg cacaggagca ggatgacaag atcggcacca tcaacgagga ggacatcttg 180  
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 gagaacaagt ttctgcagaa gtacaagccc atttgggagc agcgggtccag gatcatttca 420  
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<210> 429  
 <211> 1362  
 <212> DNA  
 <213> Saccharomyces cerevisiae

<400> 429

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 caacggccca tggctcctcc acctaaccag cagtatggac agcaatatgg tcagcaatat 180  
 gaacagcagt atggacagca atatgggcaa caaatgatc agcaattcag tcagcaatat 240  
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 ttccagcagg aacaggcaaa ggcacaatta agcaacggct acaacaatcc taatgtaaac 360  
 gcatccaata tgtacgggtc accccagaat atgtcattac ctccacctca aacacaaact 420  
 attcaaggta cagaccaacc ttatcagtat tctcaatgta ctgggcgtag aaaggctttg 480  
 attatcggtg taaactacat aggttcaaaa aatcaactgc gtggttgtat caatgatgct 540  
 cataacatct tcaacttttt gactaatggg tacgggttaca gttcagatga cattgtcata 600  
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1362

<210> 430  
<211> 1164  
<212> DNA  
<213> *Saccharomyces cerevisiae*  
  
<400> 430

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gaaataaaaa cctacaaata ctga 1164

<210> 431  
<211> 2469  
<212> DNA

<213>      *Saccharomyces cerevisiae*

<400>      431

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ttgcaagagg atattctcaa agaagagaat gaattgaagg aacaccctaa aaattccgct 180  
gaaatagagg cttctctgag gaaagttttc caagatttca aagaaaactca agatgtctca 240  
gcctccaccg agttgacgat atcgaatctg acagaaggta tctcgtacct ggacattgcc 300  
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 <213> *Saccharomyces cerevisiae*

<400> 432

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<210> 433  
 <211> 2241  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 433

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<210> 434  
 <211> 1812  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*  
 <400> 434



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 <211> 2124  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 435

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<210> 436  
 <211> 978  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 436

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<210> 437  
 <211> 2271  
 <212> DNA  
 <213> *Saccharomyces cerevisiae*

<400> 437

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438

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 <213> *Saccharomyces cerevisiae*

<400> 442

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